US Robotics

#1 selling modem in the world!

US Robotics X2 TECHNOLOGY

SPORTSTER®

56k Faxmodem

User's Guide & Reference

U.S. Robotics

#1 selling modem in the world!

U.S. Robotics X2 TECHNOLOGY

Serial Number: _____

IRQ: _____

COM Port: _____

SPORTSTER®

56K

Faxmodem

User's Guide & Reference

This manual covers installation and operating instructions for the following U.S. Robotics modems:

- **Sportster 56Kbps* external and internal modems**

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Skokie, IL 60077-2690
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* **IMPORTANT!** This modem is 56Kbps capable. However, current FCC rules limit download speeds to 53Kbps. See page 3 for details.

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Introduction

This introduction provides a general overview of your new Sportster and where it can take you. Also included: information about U.S. Robotics, the groundbreaking new x2™ technology, tips concerning the use of this manual, and where to go next to start hooking up and trying out your new Sportster modem.

U.S. Robotics: The Intelligent Choice in Information Access™

Congratulations! You have just purchased the Sportster 56K faxmodem. Since 1976, U.S. Robotics has grown to become a key manufacturer and developer of information access technology. U.S. Robotics' advanced technology allows you to use your faxmodem to open up a new world of information access. And now you can take advantage of the highest transfer rates available today with our new x2 technology!

As an innovator in the data communications field, U.S. Robotics has a history of bringing the latest technology to market at an affordable price.

U.S. Robotics owns the core technology, known as the data pump, that works in its access products. This allows U.S. Robotics to bring new technologies and features to market faster and at a lower cost while passing the savings on to you.

Be sure to read the following section to learn more about the latest U.S. Robotics breakthrough, x2 technology. Your new Sportster takes advantage of this technology to make connecting over analog lines faster than ever before.

For more information on U.S. Robotics, visit the U.S. Robotics World Wide Web Home Page at: **http://www.usr.com**.

WELCOME TO X2™ INFORMATION ACCESS

The latest breakthrough in online communications

Until now, 33.6 Kbps was thought to be the practical limit for speed over standard phone lines. Now, x2 shatters that barrier, to bring you download speeds of up to 56 Kbps. However, due to FCC rules which restrict power output of your service provider's modems, current download speeds are limited to 53Kbps. This modem is software upgradable, allowing easy upgrades to new features and enhancements as they become available.

An integrated end-to-end solution from the leader

U.S. Robotics is well positioned to bring you x2 technology. Our Sportster® modems are the world's number one seller, and our Total Control™ and Courier™ product lines are favored by many Internet service providers. This widespread acceptance allows U.S. Robotics to offer x2 technology to virtually anyone.

Taking advantage of the modern telephone network

x2 uses the increasingly digital telephone network to bring you faster downloads, by eliminating the analog-to-digital conversion in the downstream path.

x2 takes advantage of the typical network configuration found when an analog subscriber connects to a digitally connected server. Because it bypasses the analog-to-digital conversion in the downstream path, x2 can use nearly all of the available 64K network bandwidth. (Upstream data, typically less speed sensitive, travels at the standard V.34 rate.)

The result is a completely new kind of transmission technique. Based on "encoding" rather than "modulation," it can give you download speeds that you never thought possible. What's more, with standard V.42 *bis* compression, x2 can download at speeds up to a blistering 115.2 Kbps.

The new standard for online speed

U.S. Robotics has already submitted x2 to the ITU-T standards committee for acceptance as the next online standard.

For more information on U.S. Robotics' x2 technology, see our World Wide Web page at **http://x2.usr.com**.

PRODUCT FEATURES

Your new x2 modem provides many advanced features. Here are just a few:

Modulation Schemes

x2
ITU-T V.34+
ITU-T V.34
ITU-T V.32bis
ITU-T V.32
ITU-T V.22bis
ITU-T V.22
ITU-T V.23
Bell 212A
ITU-T V.21
Bell 103

Error Control and Data Compression Schemes

ITU-T V.42
ITU-T V.42bis
MNP 2-5

Fax Modulation Schemes

ITU-T V.17
ITU-T V.29
ITU-T V.27ter
ITU-T V.21

Fax Standards

EIA 578 Class 1 FAX
EIA 592 Class 2.0 FAX

Front Channel Link Rates

33333, 37333, 41333, 42666, 44000, 45333, 46666, 48000, 49333, 50666, 52000, 53333, 54666, 56000, 57333

Back Channel Link Rates

14400, 16800, 19200, 21600, 24000, 26400, 28800, 31200

V.34+ Link Rates

4800, 7200, 9600, 12000, 14400, 16800, 19200, 21600, 24000, 26400, 28800, 31200, 33600

V.32bis Link Rates

4800, 7200, 9600, 12000, 14400

Additional Link Rates

300, 1200/75 (V.23), 1200, 2400

Fax Link Rates

2400, 4800, 7200, 9600, 12000, 14400

READ THIS FIRST!

If you have an internal modem and are using the Windows 3.x operating system, start at **Part I, Section A: Internal Modem Installation with Windows 3.x** (page 9).

If you have an internal modem and are using the Windows 95 operating system, start at **Part I, Section B: Internal Modem Installation with Windows 95** (page 41).

If you have an external modem and are using the Windows 3.x operating system, start at **Part II, Section A: External Modem Installation with Windows 3.x** (page 69).

If you have an external modem and are using the Windows 95 operating system, start at **Part II, Section B: External Modem Installation with Windows 95** (page 89).

INF Update

You can download the latest Windows 95 and Windows NT 4.0 inf file from our BBS or FTP sites:

BBS: 847-982-5092
(look in file directory 7)
FTP: ftp.usr.com/usr/dl07
(filename = mdmusrsp.inf)

PART I - INTERNAL MODEM INSTALLATION

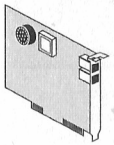
This part of the manual covers the installation of your internal Sportster and the accompanying fax/data software. The instructions are provided for both Windows 3.1/ 3.11 (hereafter jointly referred to as Windows 3.x) and Windows 95 users. Please refer to the section dealing with the operating system you use. The two sections are:

Section A: Internal Modem Installation with Windows 3.x (page 9)

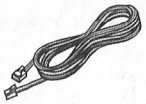
Section B: Internal Modem Installation with Windows 95 (page 41)

Section A: Internal Modem Installation with Windows 3.x

You'll need these items from your Sportster box:

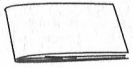


modem



phone cord

Connections CD

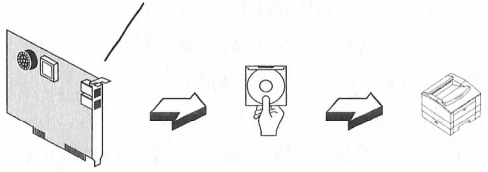


manual

Plus:

a screwdriver (not included)

THIS FIRST SECTION WILL WALK YOU THROUGH THE STEPS INVOLVED IN CONNECTING YOUR SPORTSTER TO YOUR COMPUTER.



A Word about COM Ports and IRQs

Most computer accessories — a mouse, sound card, enhanced graphics card, scanner, etc. — require a special connection through which they can communicate with the computer. For an internal modem, it's

called a communications (COM) port. Most computers have 1 or 2 COM ports but can have up to 4. On an internal modem, a COM port is represented by the modem itself.

Each COM port uses an IRQ (interrupt request). An accessory uses an IRQ to get the attention of your computer's CPU (central processing unit) so that the accessory can perform a task. The computer stops what it's doing, depending on the priority of the request, to help the accessory perform its task. When two accessories share an IRQ, it's like two people asking different questions in unison to a third person. Just as the person being asked the two questions cannot understand either request, a computer can lock up or otherwise fail to communicate properly with your modem when there is an IRQ conflict.

KEY POINT: Accessories cannot share COM ports and should not share IRQs. When accessories try to share settings, they will either not work properly or not work at all. This section of the manual will help you understand the COM/IRQ settings on your new Sportster.

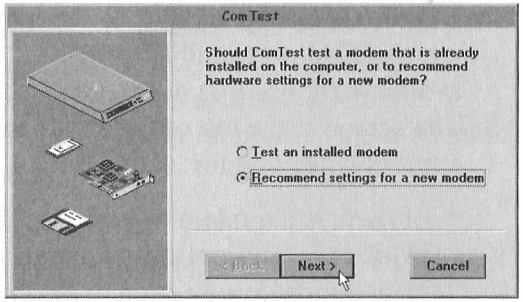
U.S. Robotics has set your Sportster to use COM 2 and IRQ 3. This is the industry standard for modem settings. In most cases, these settings will work. In some instances, however, these settings are already being used by another accessory, such as a sound card or another COM port. We recommend that you run the comtest program (on the *Connections* CD) to determine what settings your modem should use.

NOTE: Some communications software programs require a particular setting for your modem. (RapidComm, which shipped with your modem, does not.) If you wish to use a program other than RapidComm, now is a good time to read that software's manual to determine what setting is required.

How to Use comtest to Determine Your Modem's Settings

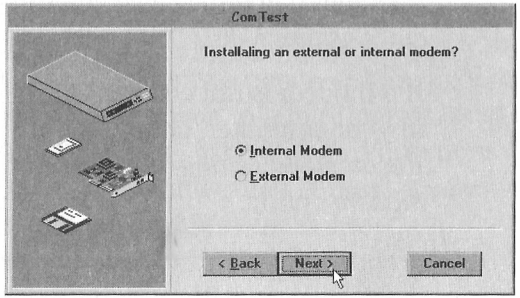
1. Insert your *Connections* CD into your CD-ROM drive.
2. In the Windows *Program Manager,* select Run from the File menu. Enter the file name as **d:\comtest.exe**. This starts comtest, the program that determines which COM ports and IRQs are available for use by your modem.
3. The screen at the top of the next page appears when comtest starts.

   - If there is a modem in your computer which you are replacing with your new Sportster, you need to go to "Testing an Installed Modem" on page 13 to determine which options to select so that comtest can detect what the older modem's COM and IRQ settings are.
   - If a modem is not currently installed in your computer, choose the *Recommend settings for a new modem* option.



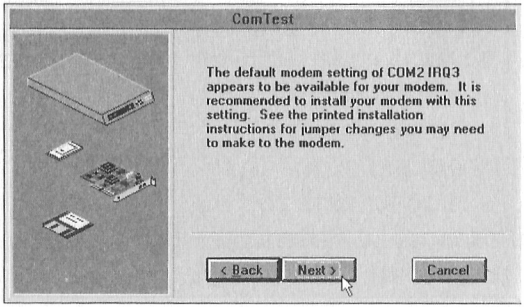
Then click on the *Next* button.

4. If it's not already selected, choose the *Internal Modem* option.



Then click on the *Next* button.

5. If you have a free setting, you will see a screen like this.



COM2/IRQ3 is free in this example. Comtest might instead recommend COM1/IRQ4, COM3/IRQ4, or COM4/IRQ3 for your modem.

Write down the settings you're given in the spaces provided on the first page of this manual. You'll need to know the settings later.

Click on the *Next* button.

screen that tells you "Testing is complete." This screen will also tell you which COM and IRQ settings your present modem is using. These are the settings you want to use for your new Sportster. Write the settings down in the spaces provided on the first page of this manual.

Turn off your computer and remove your present modem.

- If your present modem is using COM2/IRQ3, go to "How to Insert the Modem" on page 19.
- If your present modem uses settings other than COM2/IRQ3, go to "How to Change the Factory Settings" on page 17.

What to Do with comtest's Recommendation

NOTE: If your communications software requires a setting for your modem that comtest does not recommend, there is a good chance that the setting is being used by another device in your system. To find out how to free that setting in your system, consult your computer manufacturer's manual. If the communications software requires COM2/IRQ3, go to "How to Insert the Modem" on page 19. If the communications software requires different settings, go to "How to Change the Factory Settings" on page 17.

If comtest recommended COM1/IRQ4

You will have to change the factory settings on your modem.

Write "COM1" and "IRQ4" in the spaces provided on the first page of this manual.
Go to "How to Change the Factory Settings" on page 17.

If comtest recommended COM2/IRQ3

You can insert the modem, as is, into your computer.

Write "COM2" and "IRQ3" in the spaces provided on the first page of this manual.
Go to "How to Insert the Modem" on page 19.

If comtest recommended COM3/IRQ4 or COM4/IRQ3

Do not use either of these settings.

While the COM port part of the setting is acceptable (comtest only recommends COM ports that are not being used), the IRQ part of the setting is not acceptable. When comtest recommends either COM3/IRQ4 or COM4/IRQ3, the IRQ in the setting is being used by another accessory. You could use the suggested IRQ for the modem, but you run the risk that the modem and/or the other accessory sharing the IRQ might not work properly.

If you do not have a sound card, use COM3/IRQ5. Write "COM3" and "IRQ5" in the spaces provided on the first page of this manual. You will have to

change the factory settings on your modem. Go to "How to Change the Factory Settings" on page 17.

If you do have a sound card, use COM2/IRQ3. To use this setting, you have to first disable your computer's second serial port (COM2). This is a pronged socket on the back of your computer.

Go to your computer manufacturer's manual.

- Find out which of the sockets on the back of your computer is the second serial port.
- If you have something plugged into that port, find out if you can plug it in somewhere else. Any accessory plugged into that port after the port has been disabled will not work.
- Find out how to disable the COM port.
- Then return to this point in this manual to continue.

After disabling COM2, you can use the COM2/IRQ3 setting.

Write "COM2" and "IRQ3" on the first page of this manual and go to "How to Insert the Modem" on page 19.

If comtest tells you that *You do not have any available COM ports and/or IRQs*

We recommend you disable COM1 or COM2. When you disable one of these COM ports, you can use it and its default IRQ for your modem. Go to your computer manufacturer's manual.

- Find out which socket is COM1 and which is COM2.
- If nothing is plugged into either port, you can choose either of the ports to disable.

Your computer manufacturer's manual will tell you how to disable the COM port.

- If one port does not have anything plugged into it, note if the port is COM1 or COM2. This is the port you'll want to disable for your modem.
- If both ports are being used, you may be able to attach one of the plugged-in accessories elsewhere so that you can disable its COM port. The accessory will not work once its port is disabled.

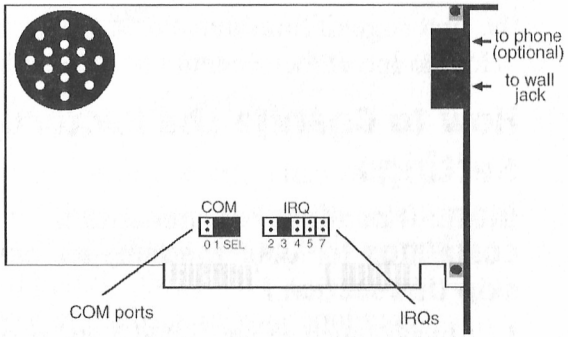
If you've disabled COM1, you can now use the COM1/IRQ4 setting. Write it down on the first page of this manual. Go to "How to Change the Factory Settings" in the next column.

If you've disabled COM2, you can now use the COM2/IRQ3 setting. Write it down on the first page of this manual. Go to "How to Insert the Modem" on page 19.

How to Change the Factory Settings

(NOTE: If comtest recommended COM2/IRQ3 for your modem, you can skip this section.)

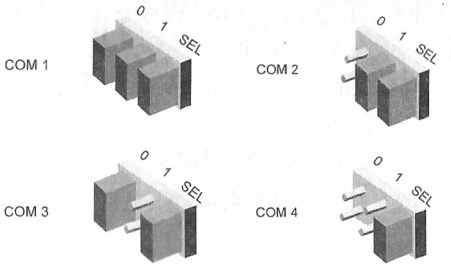
1. Always touch an unpainted metal part of your computer (the back is usually unpainted) to discharge static electricity before handling the modem. Static can damage your modem.
2. Take the modem out of its plastic bag.
3. Find the COM port and IRQ shunts (small black plastic pieces) on your modem. They should be in roughly the area indicated in the following illustration.



4. To change the COM port and IRQ settings, you have to move the shunts on the COM port and IRQ pins. To do this, lift the shunts off the pins.

TIP: Grasp the shunts with a tweezers or needle-nosed pliers. DO NOT grasp too firmly, as you may crush the shunts. If a shunt seems stuck, gently rock it back and forth as you lift. Do not touch any other part of the modem or your computer with the tweezers/pliers.

5. Move the shunt to the new setting.
   - The COM port setting can involve one to three shunts. The four possible COM port settings are as follows:



- Unlike most COM port settings, the IRQ setting involves only one shunt. Simply move the shunt to the pin labeled with the IRQ you want.

How to Insert the Modem

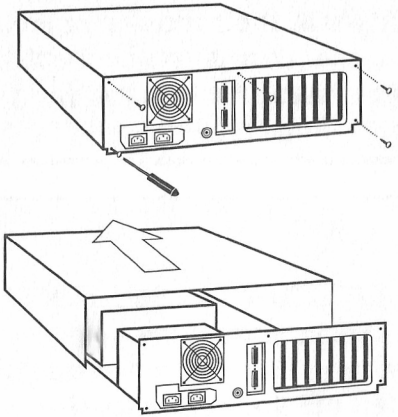
NOTE: Before installing your modem, write its serial number in the space provided on the first page of this manual. (You'll find the serial number underneath the bar code on the white sticker on the modem and on the box the modem came in.) If you place a call our technical support department, the technical support representative will ask you for the serial number. This will help him or her identify the type of modem you have.

1. Turn off your computer and unplug it from the electrical outlet.
2. Unplug any peripheral devices (printer, monitor, keyboard, mouse, etc.) from the computer.

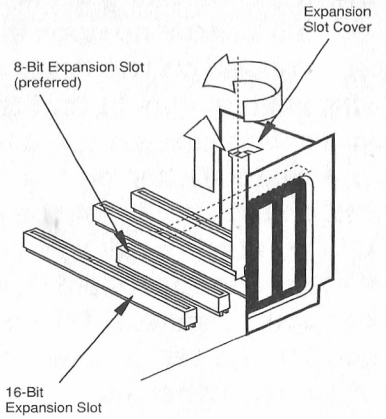
TIP: Before you unplug anything, label the cords or make a sketch of how things are connected. This can be helpful when you plug things back in later.

CAUTION: To avoid risk of electric shock, make sure your computer and all peripheral devices are turned off and unplugged.

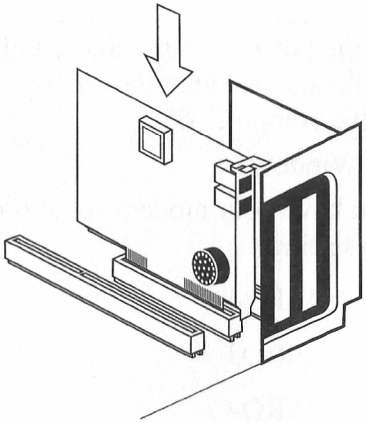
3. Remove the screws from your computer's cover and then remove the cover, as shown in the following diagrams. Your computer may differ in appearance from these diagrams, but the basic principle for removing the cover should be the same. Refer to your computer manufacturer's manual if you need further instructions.



4. Find an empty ISA expansion slot that's at least as long as the gold edge of your modem. (ISA slots are black plastic grooves lined with silver.) Unscrew and remove the expansion slot cover (the long narrow piece of metal that keeps dust from entering through the opening perpendicular to the slot). Be careful not to drop the screw into the computer.



5. Holding the modem at each corner, with the gold edge facing the slot, push the modem down as gently as possible until it snaps into the expansion slot. (NOTE: The drawings show horizontally aligned expansion slots. Some computers have vertically aligned slots. The instructions apply to both styles.)



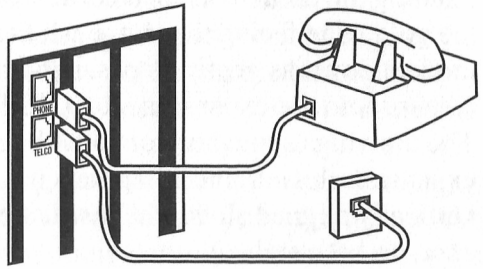
You'll have to apply a little pressure to seat the modem properly. Sometimes a gentle back-and-forth motion helps to fit the modem all the way into the slot. If you feel resistance, the modem may not be properly lined up with the slot. Do not force it into the slot. Remove the modem and try again.

6. Once the modem is in place, fasten it firmly into place using the screw that you removed in step 4.
7. Put the computer's cover back on and fasten it with the screws.
8. If you currently have a phone plugged into the wall jack you're going to use for the modem, disconnect the phone from the jack.
9. Plug one end of the phone cord that came with the modem into the TELCO jack at the rear of the modem.

WARNING: The phone jack you use must be for an ANALOG phone line. Most offices use digital lines. Be sure you know what type of line you have. The modem will be damaged if you use a digital phone line.

10. Plug the other end of the cord into the wall jack.

(If you want to use a telephone on that line when you're not using the modem, plug the telephone's cord into the modem's PHONE jack.)



11. Plug the power cords, cables, and peripherals back into the computer and turn the computer on.

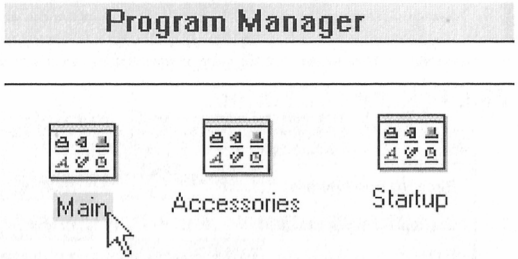
12. Start Windows.

13. If you have your modem set to one of these settings.

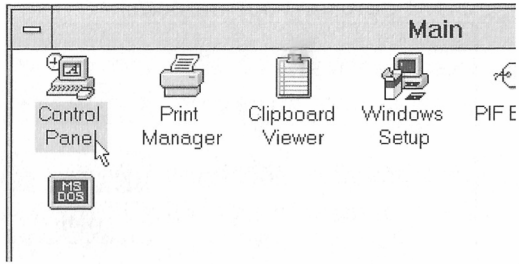
- COM1/IRQ4
- COM2/IRQ3
- COM3/IRQ4
- COM4/IRQ3

Go to "Installing RapidComm with the Setup Wizard" on page 25.

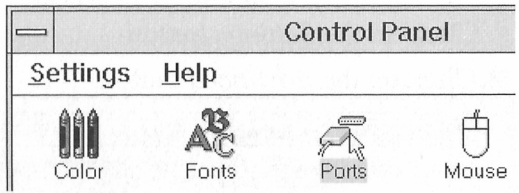
14. If you have your modem set to a setting that is not in the preceding list, enter your *Program Manager* and double-click on the *Main* icon.



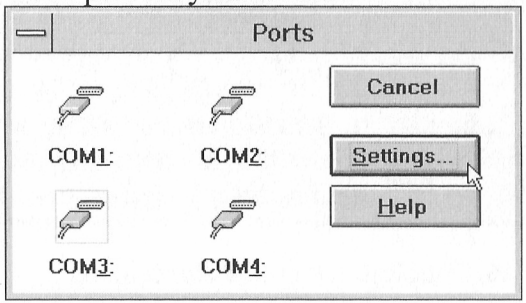
15. Double-click on the *Control Panel* icon.



16. Double-click on the *Ports* icon.

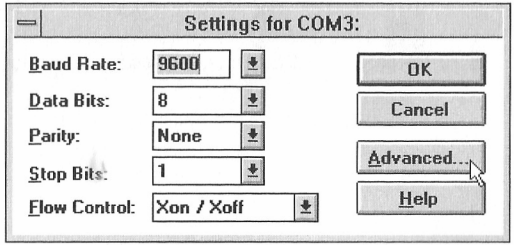


17. If it's not already selected, select the COM port for your modem.

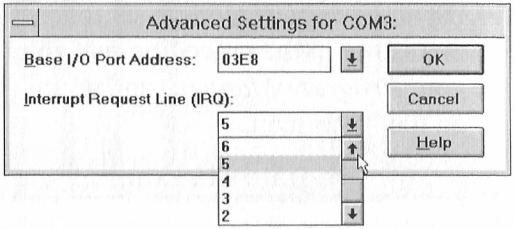


Click on the *Settings* button.

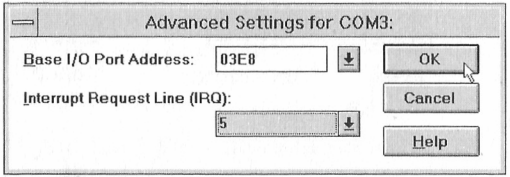
18. Click on the *Advanced* button.



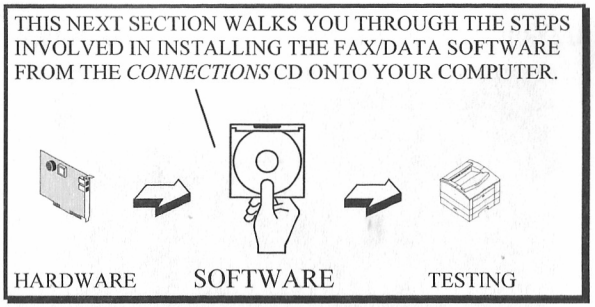
19. Scroll to select the IRQ you set your modem for.



20. Click the *OK* button.



You will see a brief series of screens after the preceding screen. Click on each screen's *OK* button until you see a screen with a *Close* button. Click on the *Close* button to exit *Program Manager*.



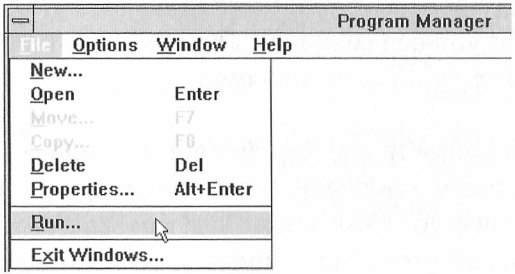
Installing RapidComm with the Setup Wizard

This section will walk you through the basics of running the U.S. Robotics Setup Wizard, which installs RapidComm (fax/data software) and other useful software programs. It also allows you to register your new Sportster modem. RapidComm fax/data software simplifies sending and receiving faxes directly from your computer desktop. You can send faxes to specified groups of numbers after building your own fax directory and specify individual cover pages when necessary. And you can send individual faxes without exiting your word processing program.

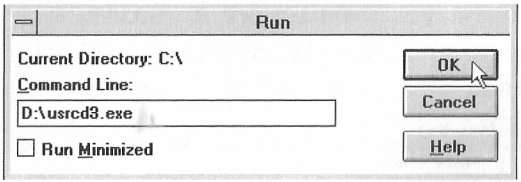
Additionally, the RapidComm fax/data software works with your modem to connect to BBSs, online services, and Internet providers. You can take advantage of this access to enter a new world of information and entertainment.

NOTE: If you have an older version of RapidComm installed on your system, uninstall it before continuing.

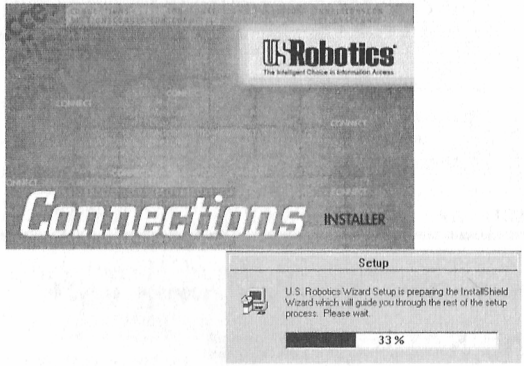
1. In Program Manager, click on the *File* menu and select *Run*.



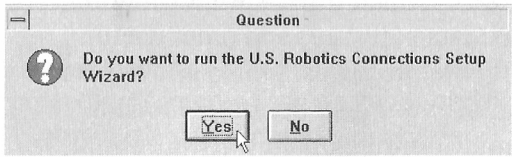
2. In the text box, type **D:\usrcd3.exe** (If your CD-ROM drive has a letter name other than **D**, type that letter in place of **D**.) Then click the *OK* button.



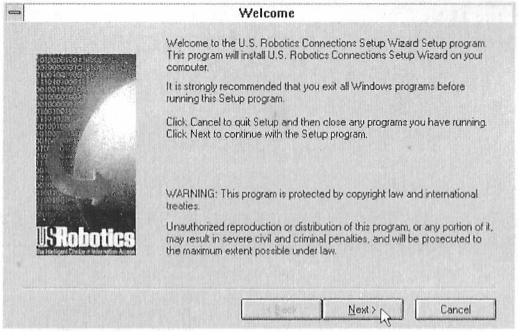
3. You will see a screen that looks like this.



4. After you read this screen, click on the *Yes* button.

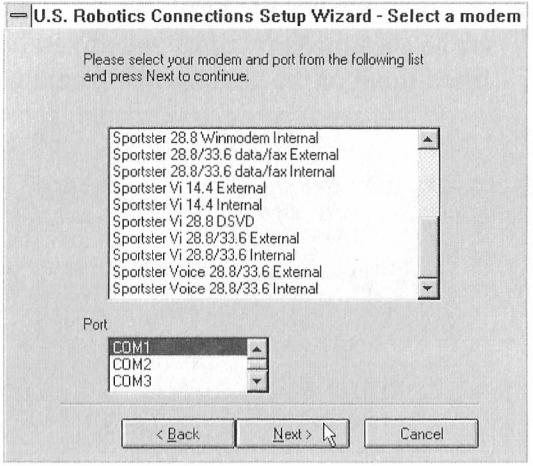


5. After reading the following screen, click on the *Next* button.

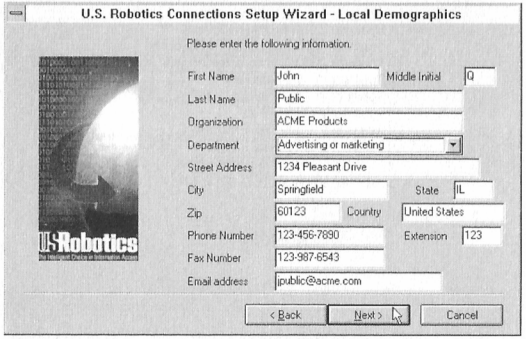


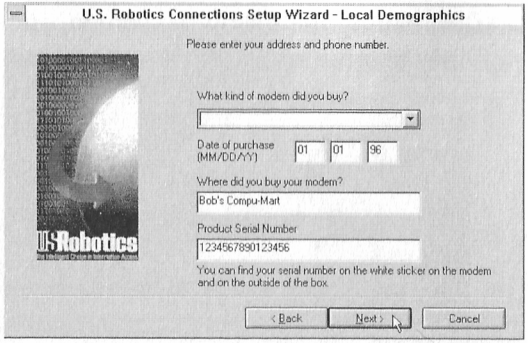
6. You will see this screen for a moment.

7. When you see this screen, select the correct modem and then click on the *Next* button.

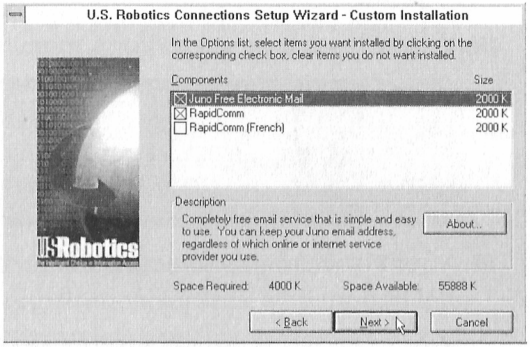


8. When you see the following two screens, fill in the blank boxes with the appropriate information, using the *Tab* key to move between fields. Click on each screen's *Next* button when you have filled in all of the necessary information.



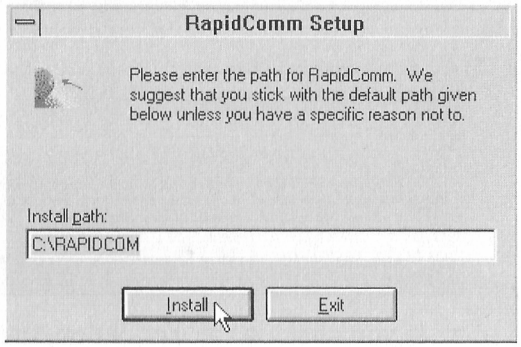


9. In the following screen, un-check any software you do not want by clicking on the name of the software. NOTE: Make sure you select the correct translation of RapidComm. Then click on the *Next* button.

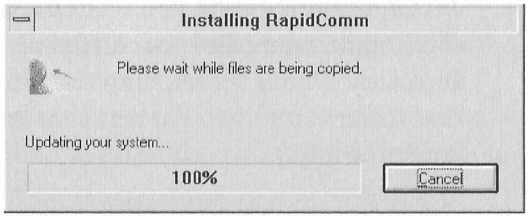


10. As the CD installs the software on your system, you will see a series of screens that guide you through the installation. Please follow the on-screen directions.

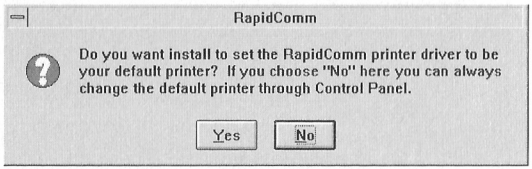
11. When you see this screen, click on the *Install* button, unless you want to copy the RapidComm files to a different directory. (Your screen may show a path that differs from what appears on the screen below.)



12. You will see this screen for a moment.

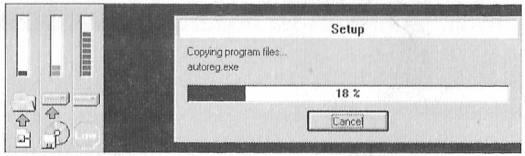


13. After you read this screen, click on either the *Yes* or *No* button.

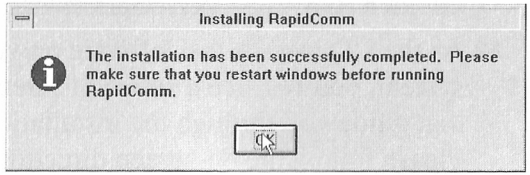


- If you click on the *Yes* button, every document you print will be treated as a fax unless you change the printer selection in the program from which you're trying to print.
- If you click on the *No* button, RapidComm will not be chosen as the default printer. When you want to send a fax, you will have to select RapidComm as the printer in the program from which you're trying to print.

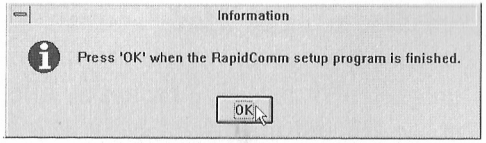
14. You will see this screen for a moment.



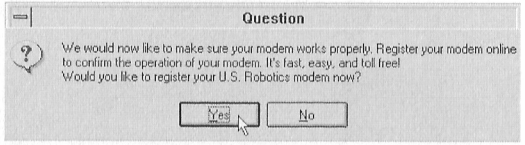
15. After you read this screen, click on the *OK* button.



16. After you read this screen, click on the *OK* button.

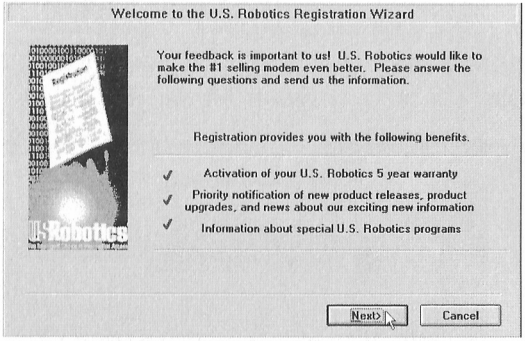


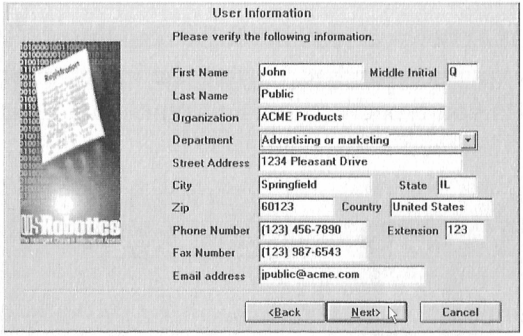
17. When you see this screen, we recommend you click on the *Yes* button.

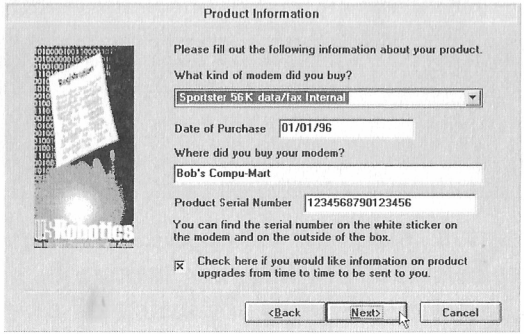


NOTE: If you click on "No," the registration screens will appear upon your next restart.

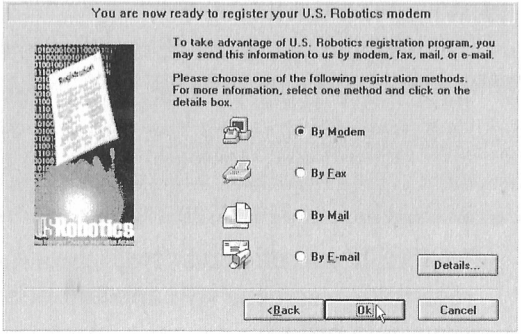
18. After you read the following three screens and verify that the information you typed earlier is correct, click on each screen's *Next* button.



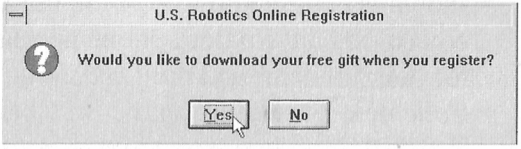




19. When you see this screen, *By Modem* will already be selected. We recommend you choose the *By Modem* option because it's a great way to try out your Sportster. Choose *By Modem* by clicking on the *OK* button.



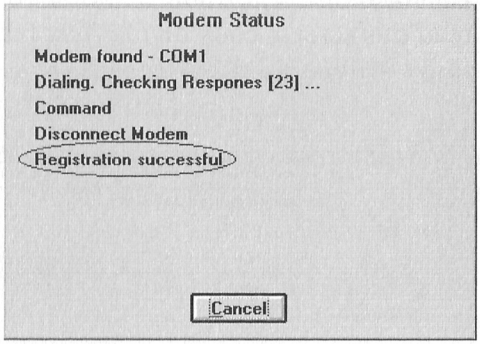
20. After you read this screen, we recommend you click on the *Yes* button.



21. When you see this screen

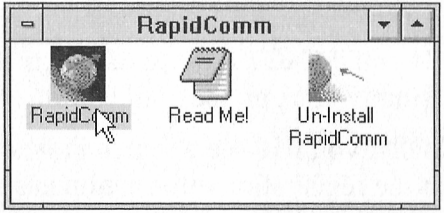
- If you have to dial a prefix (such as 9) to make a call outside your building, type the prefix before the 1 in the Prefix box and then click on the *Dial* button.
- If you do NOT have to dial a prefix, simply click on the *Dial* button.

22. Finally, you will see a screen indicating that the registration information has been sent (see circled text in the screen below).



23. Restart Windows.

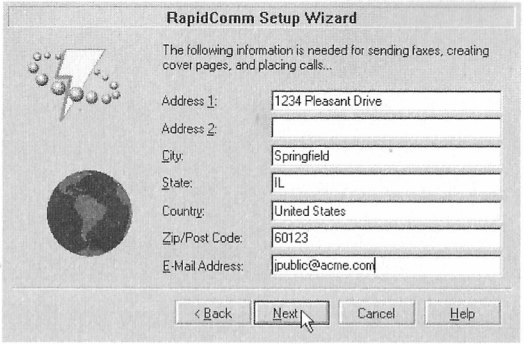
24. When you desktop appears, double-click on the RapidComm icon.



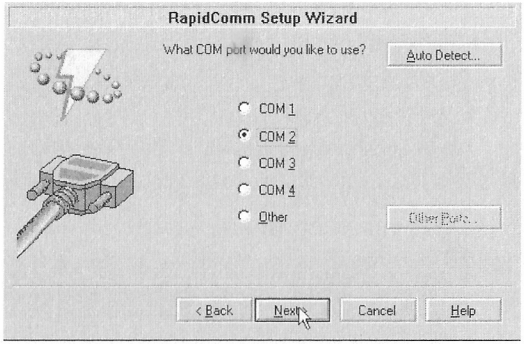
25. The following screen is the first in the RapidComm Setup Wizard. After you read this screen, click on the *Next* button.

26. When you see this screen, you should only have to verify that the information shown is correct and then fill in the *Data* box (if you have a third phone number for your modem) and the *Local Area Code* box. Then click on the *Next* button.

27. After you verify the information on this screen, click on the *Next* button.



28. When you see this screen…

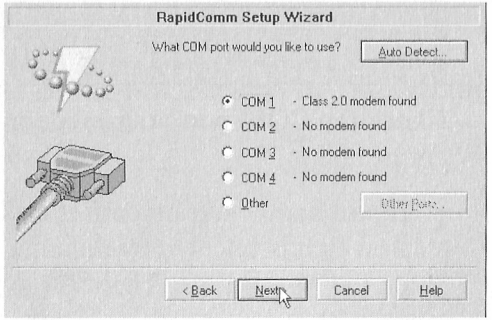


Check the COM port your modem is connected to.

- If you know your modem is on COM 2 (which is selected by default), click on the *Next* button. Then go to step 29.
- If you know your modem is connected to another COM port, select that port

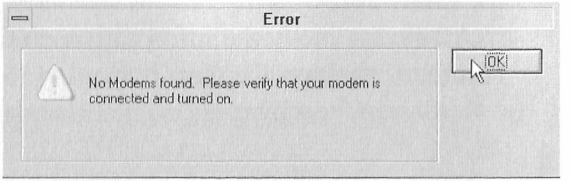
on screen and then click on the *Next* button. Then go to step 29.

- If you're not sure which port your modem is on, click on the *Auto Detect* button. The Auto Detect program will search your system to see which COM port your modem is attached to. You'll see a screen like this.



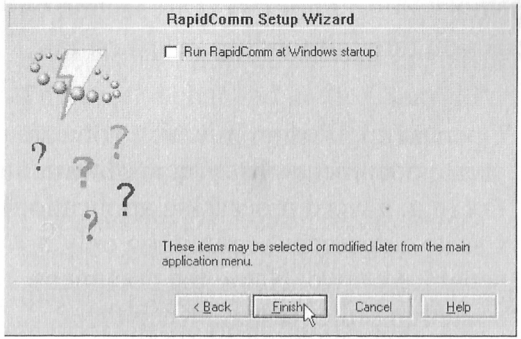
Click on the *Next* button. Then go to step 29.

- If you get this screen instead



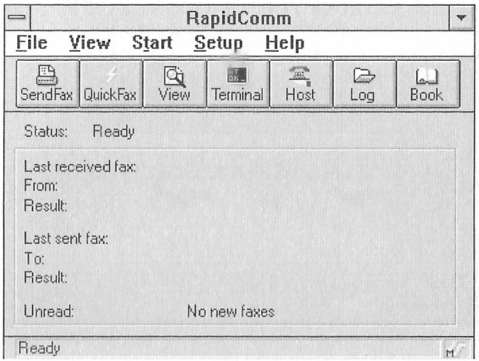
Go to the "Troubleshooting and Online Help Resources" section on page 117.

29. When you see this screen

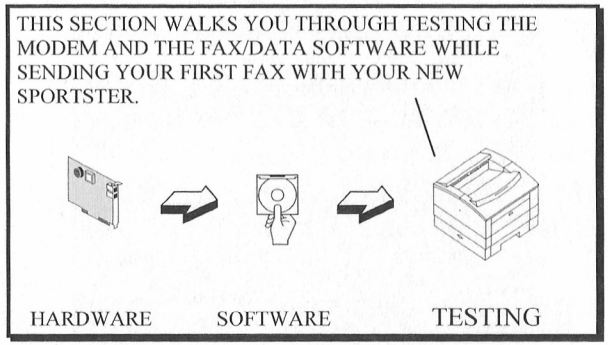


- If you want RapidComm to start up every time you start Windows, select the box to the left of Run RapidComm at Windows startup. Then click on the *Finish* button.
- If you do not want RapidComm to start up every time you start Windows, simply click on the *Finish* button.

30. After a moment, you will see this screen.



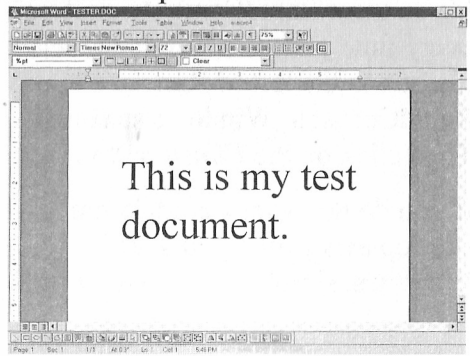
This is the main RapidComm screen, the first screen you will see when you start RapidComm. For sending your first fax, keep this screen open. (After this initial run, RapidComm will not need to be running in order to send a fax.)



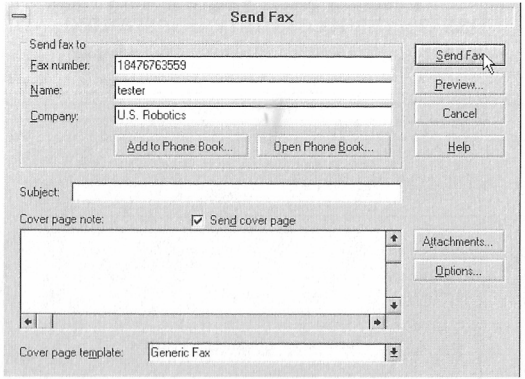
Sending Your First Fax

Using RapidComm, you can send and receive faxes directly from your computer and eliminate the need for an expensive fax machine. Once you learn the basics of sending faxes, you can learn more involved fax functions (such as sending documents to groups of numbers at assigned times) and learn how to transfer data files by referring to the electronic RapidComm manual that's on your *Connections* CD. This section will walk you through sending your first fax.

1. Open an application in which you can create documents that you might want to fax (e.g. a word processing application). Create a document containing only a sentence or two. Name the document something like "tester". Keep the document open.



2. From the File menu, select Print.
3. If it's not already selected as the printer driver, select *RapidComm* as the printer. This can be changed in the Control Panel or in the print dialog box of most Windows applications.
4. Click on the *OK* button or the *Print* button (whichever button you click in that application to indicate you're ready to print) in the print dialog box.
5. When you see this screen, fill in the information shown below in the white boxes. The U.S. Robotics fax number is 847-676-3559. This will send your "tester" document to a U.S. Robotics fax machine.

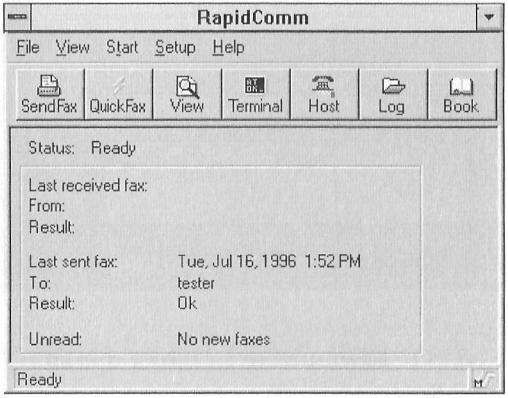


NOTE: If you have to dial a special prefix (such as 9) to connect to a telephone number outside of your building, make sure you type that prefix in before the telephone number.

When you've finished, click on the *Send Fax* button.

6. You will see a series of screens as the fax is being transmitted. When the fax

has been successfully transmitted, you will see a screen that looks like this.



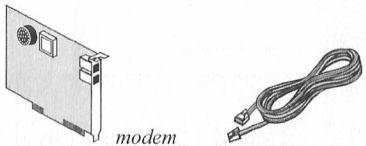
Congratulations—you are ready to start using your Sportster!

You can now go to the "Troubleshooting and Online Help Resources" section of this guide (page 117) for information on how to contact U.S. Robotics using your Sportster.

You can also go to the electronic RapidComm manual on your *Connections* CD for more detailed instructions on sending faxes and other things you can do with your Sportster and RapidComm.

Section B: Internal Modem Installation with Windows 95

You'll need these items from your Sportster box:



modem

phone cord

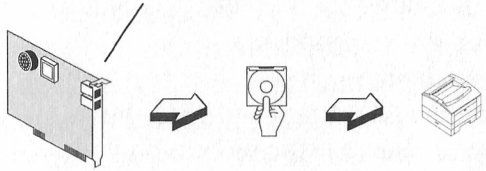
Connections CD

manual

Plus:

a screwdriver (not included)

THIS FIRST SECTION WILL WALK YOU THROUGH THE STEPS INVOLVED IN CONNECTING YOUR SPORTSTER TO YOUR COMPUTER.



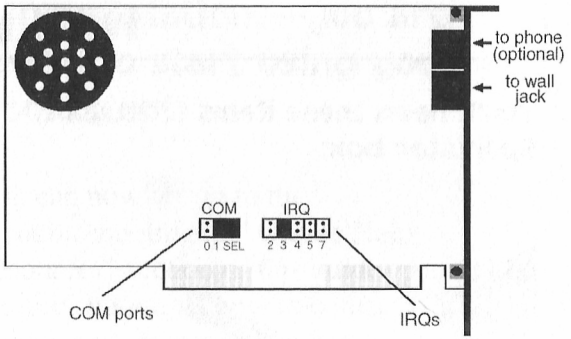
HARDWARE SOFTWARE TESTING

Plug and Play Installation

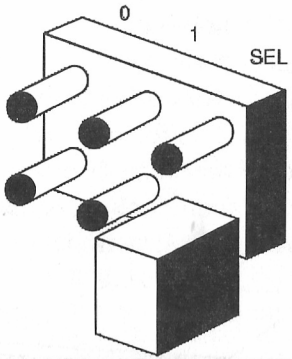
With Windows 95, you may be able to simply plug your new modem into your computer, power up, and be ready to work. The operating system does all the work of recognizing the modem for you. This section will walk you through this "Plug and Play" installation.

How to Prepare for Plug and Play Installation

1. Touch an unpainted metal part of your computer (the back is usually unpainted) to discharge static electricity. Static can damage your modem.
2. Take the modem out of its plastic bag.
3. Find the COM port and IRQ shunts (small black plastic pieces) on your modem. They should be in roughly the area indicated in the illustration at the right.



4. When doing a "Plug and Play" installation, you need to take all the shunts off of the COM and IRQ jumpers. Remove them, and then replace them so each is sitting on one jumper pin as shown in the illustration on the next page.



TIP: Try grasping the shunts with a tweezers or a needle-nosed pliers. DO NOT grasp too firmly, however, because you may crush the shunts. If a shunt seems stuck, try gently rocking it back and forth as you lift.

4. Once you have placed all the shunts on single jumper pins, you should be ready to insert the modem into your computer.

How to Insert the Modem

NOTE: Before installing your modem, write its serial number in the spaces provided on the first page of this manual. (You'll find the serial number underneath the bar code on the white sticker on the modem and on the outside of the box the modem came in.) If you ever need to call our technical support department, the technical support representative will ask you for the serial number. This will help him or her identify the type of modem you have.

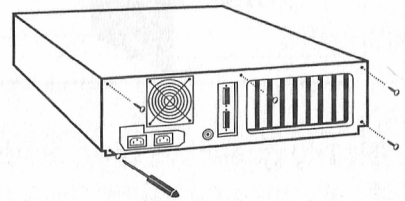
1. Turn off your computer and unplug it from the electrical outlet.

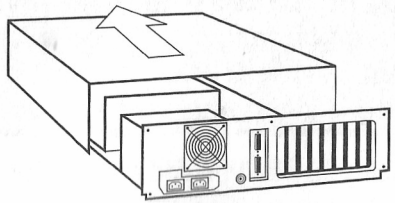
2. Unplug any peripheral devices (printer, monitor, keyboard, mouse, etc.) from the computer.

TIP: Before you unplug anything, label the cords or make a sketch of how things are connected. This can be helpful when you plug things back in later.

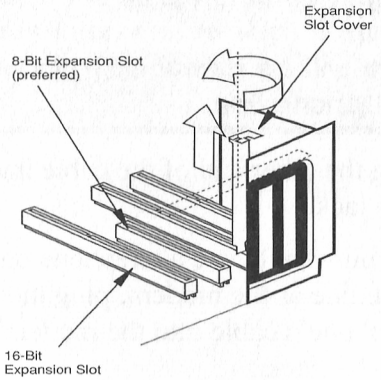
CAUTION: To avoid risk of electric shock, make sure your computer and all peripheral devices are turned off and unplugged.

3. Remove the screws from your computer's cover and then remove the cover, as shown in the following diagrams. Your computer may differ in appearance from these diagrams, but the basic principle for removing the cover should be the same. Refer to your computer manufacturer's manual if you need further instructions.

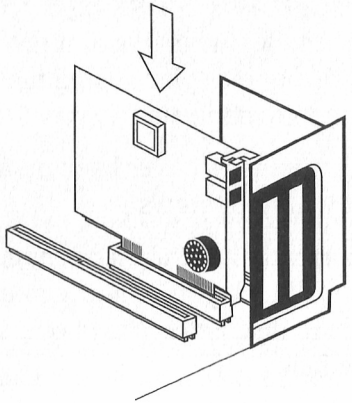




4. Find an empty ISA expansion slot that's at least as long as the gold edge of your modem. (ISA slots are black plastic grooves lined with silver.) Unscrew and remove the expansion slot cover (the long narrow piece of metal that keeps dust from entering through the opening perpendicular to the slot). Be careful not to drop the screw into the computer.



5. Holding the modem at each corner, with the gold edge facing the slot, push the modem down as gently as possible until it snaps into an expansion slot. (Note: The drawing shows horizontally aligned expansion slots. Some computers have vertically aligned slots. The instructions apply to both styles.)



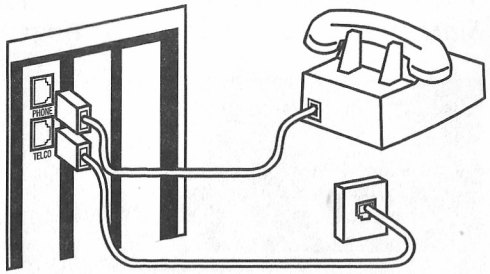
You'll have to apply a little pressure to seat the modem properly. Sometimes a gentle back-and-forth motion helps fit the modem all the way into the slot. If you feel resistance, the modem may not be properly lined up with the slot. Do not force it into the slot. Remove the modem and try again.

6. Once the modem is in place, screw the modem firmly into place using the screw that you removed in step 4.
7. Put the computer's cover back on and fasten it with the screws.
8. If you currently have a phone plugged into the wall jack you're going to use for the modem, disconnect the phone's cable from the jack.
9. Plug one end of the phone cable that came with the modem into the TELCO jack at the rear of the modem.

WARNING: The phone jack you use must be for an ANALOG phone line. Most office phones are wired through digital lines. Be sure you know what type of line you have. The modem will be damaged if you use a digital phone line.

10. Plug the other end of the cable into the wall jack.

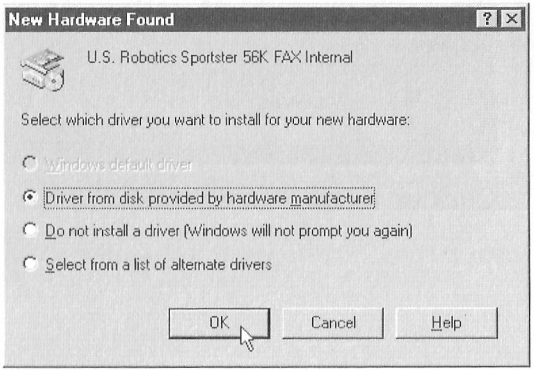
    (If you want to use a telephone on the same line as the modem, plug the telephone's cable into the modem's PHONE jack.)



11. Plug the power cords, cables, and peripherals back into the computer and turn the computer on.

How to Move Through the "New Hardware Found" Screens

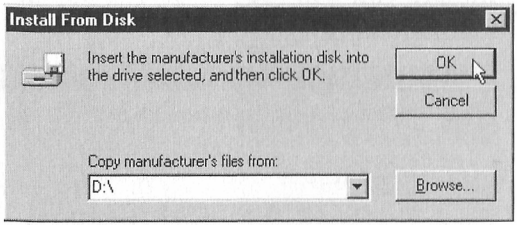
1. When Windows restarts, after about a minute you will see this screen pop up automatically.



If the *Driver from disk...* option is not already selected, select it.

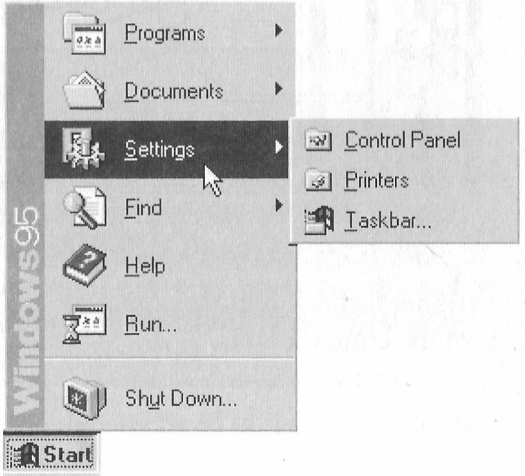
Click on the *OK* button.

2. Insert the *Connections* CD into your CD-ROM drive.
3. When you see this screen, type in **D:** to replace the **A:**. (Note: If your CD-ROM drive has a different letter name, type that letter instead of **D**.)

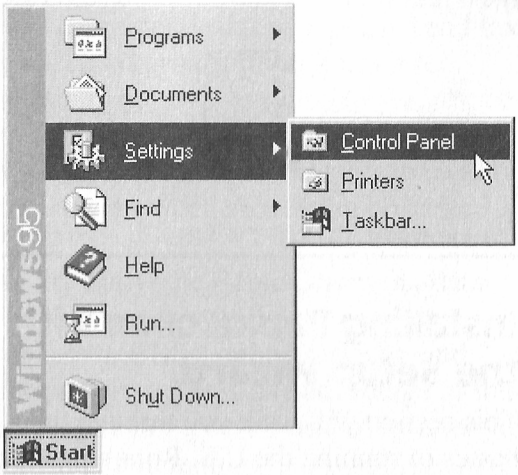


Click on the *OK* button.

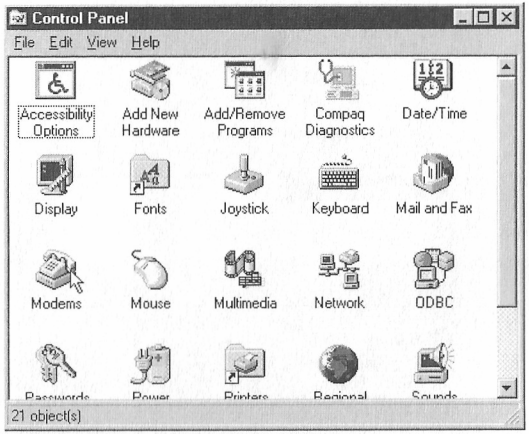
4. When your desktop returns, click on the *Start* button and scroll up to *Settings*.



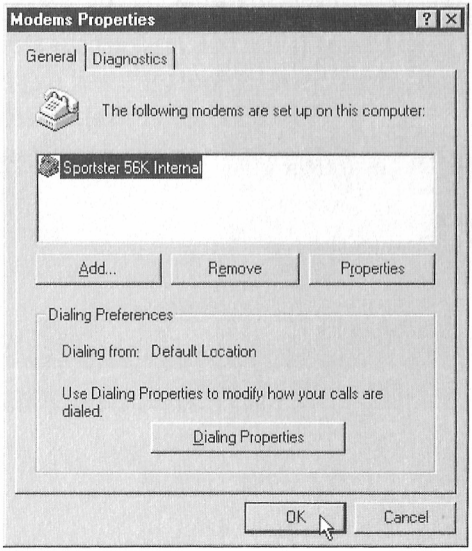
5. Scroll over to select *Control Panel.*



6. Double-click on the *Modems* icon.

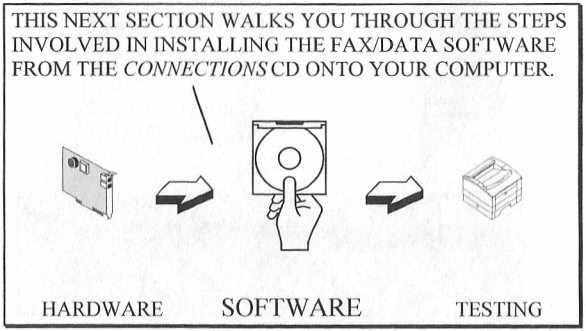


7. In the *Modem Properties* screen, you should see *Sportster 56K Internal* listed.



Click the *OK* button.

Now you should be ready to use your modem.



Installing RapidComm with the Setup Wizard

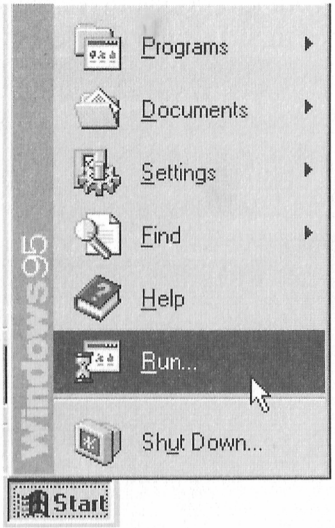
This section will walk you through the basics of running the U.S. Robotics Setup Wizard, which installs RapidComm (fax/data software) and other useful software programs. It also allows you to register your new Sportster modem.

RapidComm fax/data software simplifies sending and receiving faxes directly from your computer desktop. You can send faxes to specified groups of numbers after building your own fax directory and specify individual cover pages when necessary. And you can send individual faxes without exiting your word processing program.

Additionally, the RapidComm fax/data software works with your modem to connect to BBSs, online services, and Internet providers. Take advantage of this access to enter a new world of information and entertainment.

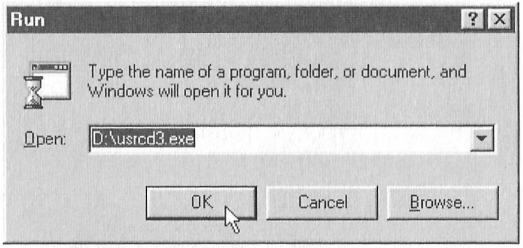
NOTE: If you have an older version of RapidComm installed on your system, uninstall it before continuing.

1. From the Windows 95 desktop, click on the *Start* button and then *Run.*

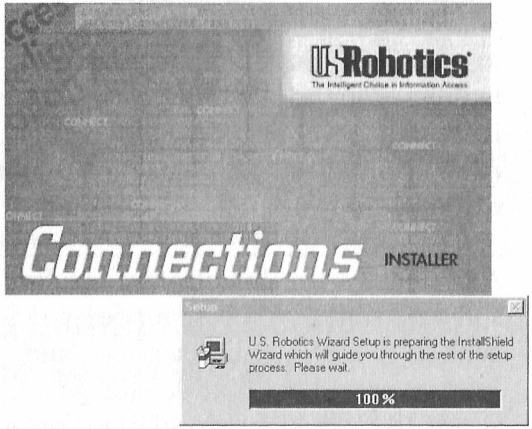


2. In the box, type **D:\usrcd3.exe**

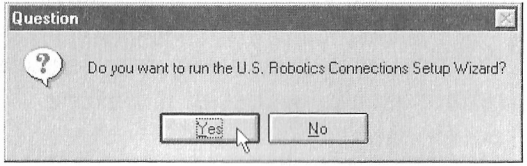
(If your CD-ROM drive has a letter name other than **D**, type that letter in place of **D**.)



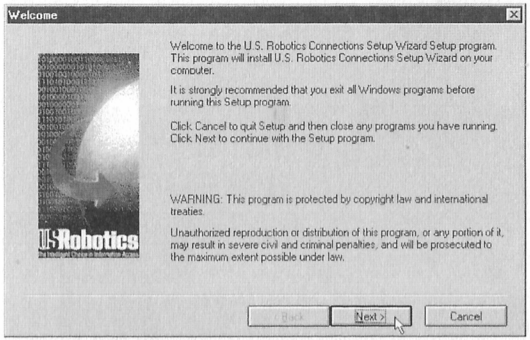
3. You will see a screen that looks like this.



4. After you read this screen, click on the *Yes* button.

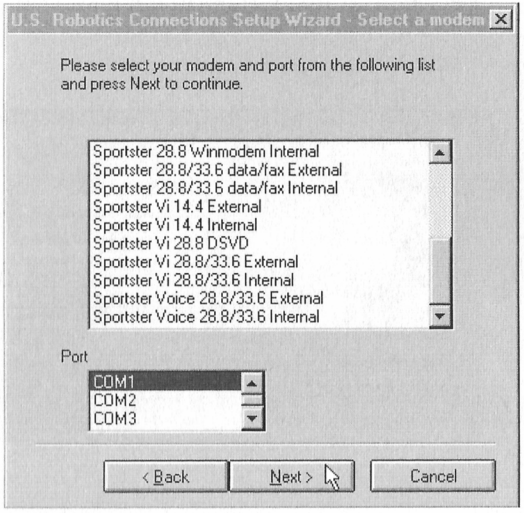


5. After you read this screen, click on the *Next* button.

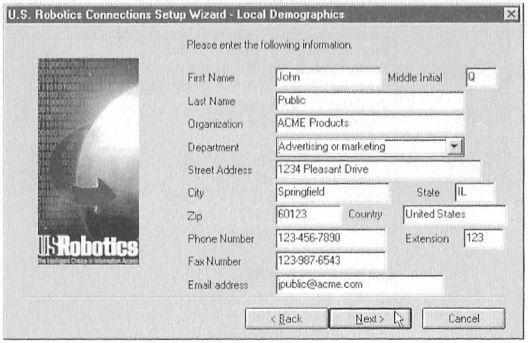


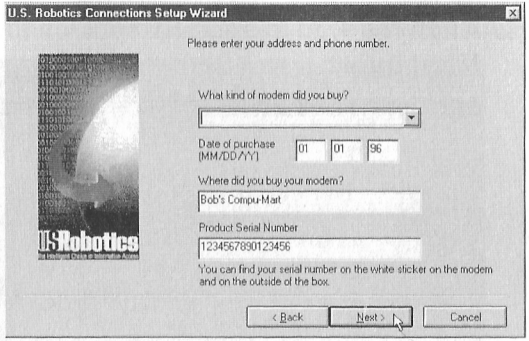
6. You will see this screen for a moment.

7. When you see this screen, select the correct modem and then click on the *Next* button.

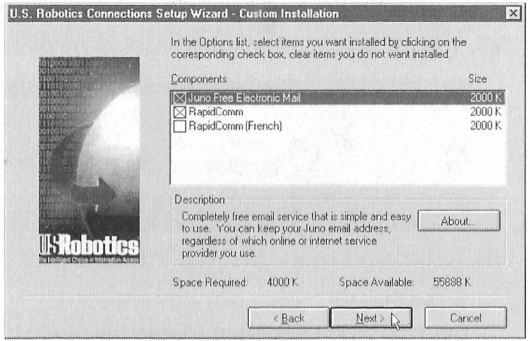


8. When you see the next two screens, fill in the blank boxes with the appropriate information, using the *Tab* key to move between fields. Click on each screen's *Next* button when you have filled in all of the necessary information.



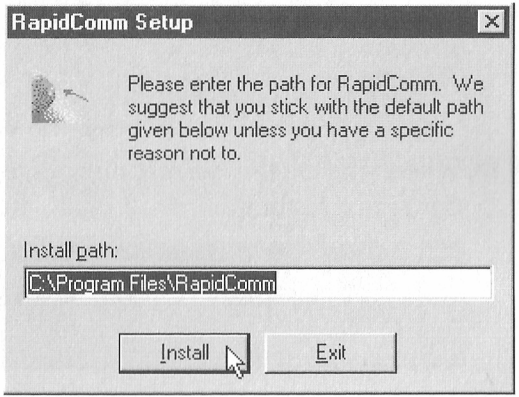


9. Un-check any software you do not want by clicking on the name. NOTE: Make sure you select the correct translation of RapidComm. Then click on the *Next* button.

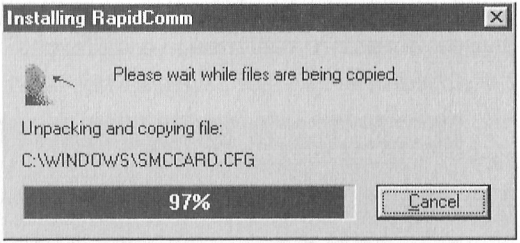


10. As the CD installs the software on your system, you will see a series of screens guiding you through the installation. Please follow the on-screen directions.

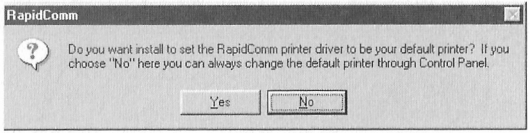
11. When you see this screen, click on the *Install* button, unless you want to copy the RapidComm files to a different directory.



12. You will see this screen for a moment.

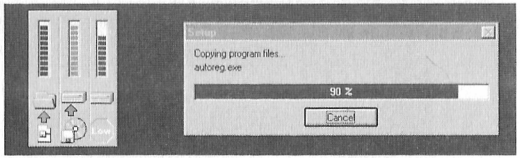


13. When you see this screen, click on either the *Yes* or *No* button.

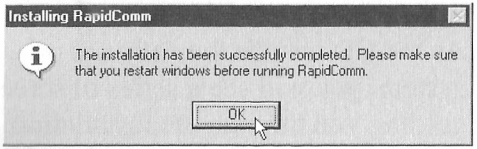


- If you click on the *Yes* button, every document you print will be treated as a fax unless you change the printer selection in the program from which you are printing.
- If you click on the *No* button, RapidComm will not be selected as the default printer. When you want to send a fax, you must select RapidComm as the printer in the program from which you are printing.

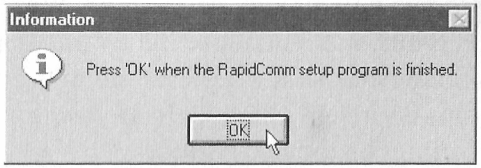
14. You will see this screen for a moment.



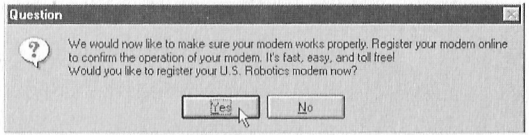
15. After you read this screen, click on the *OK* button.



16. After you read this screen, click on the *OK* button.

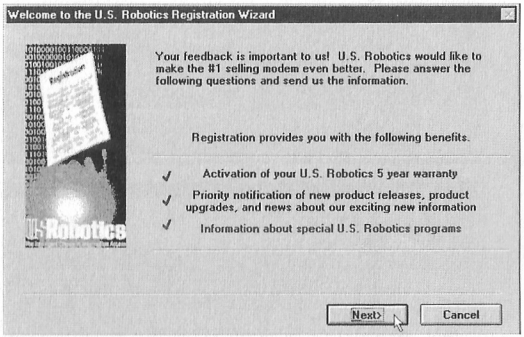


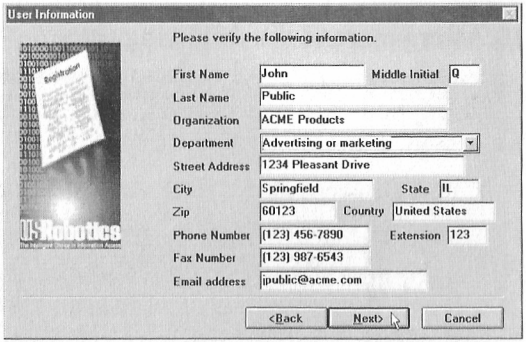
17. After you read this screen, we recommend you click on the *Yes* button.



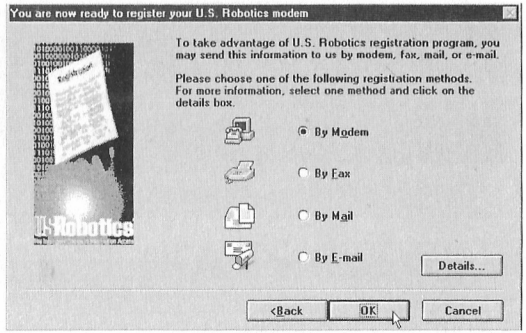
NOTE: If you click on "No," the registration screens will appear upon your next restart.

18. After you read the following three screens and verify that the information you typed earlier is correct, click on each screen's *Next* button.

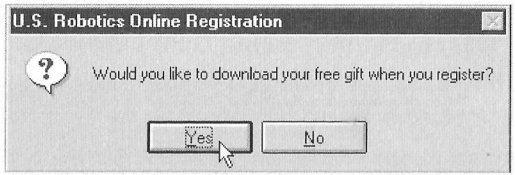




19. When you see this screen, you are ready to register your new Sportster. *By Modem* will already be selected. We recommend you choose the *By Modem* option because it's a great way to try out your Sportster. Choose *By Modem* by clicking on the *OK* button.



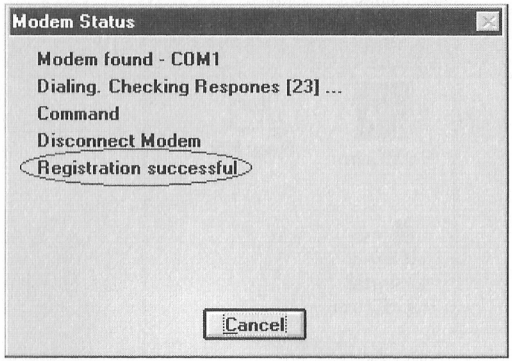
20. After you read this screen, we recommend you click on the *Yes* button.



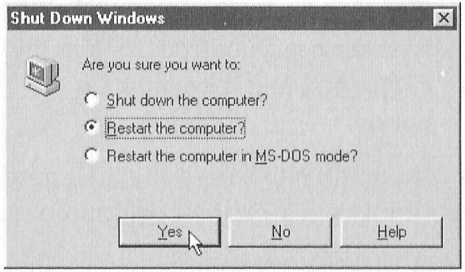
21. When you see this screen…

- If you have to dial a prefix (such as 9) to make a call outside your building, type the prefix before the 1 in the *Prefix* box and then click on the *Dial* button.
- If you do NOT have to dial a prefix, simply click on the *Dial* button.

22. You will see a screen indicating that the registration information has been sent (see circled text in the screen below).

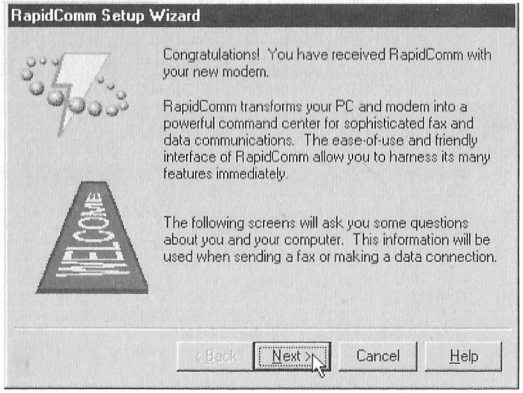


23. Restart Windows.

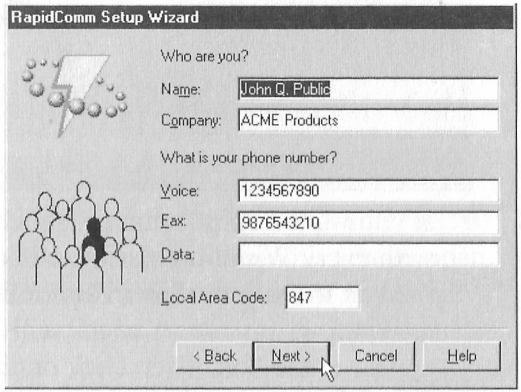


24. When you desktop appears, double-click on the *RapidComm* icon.

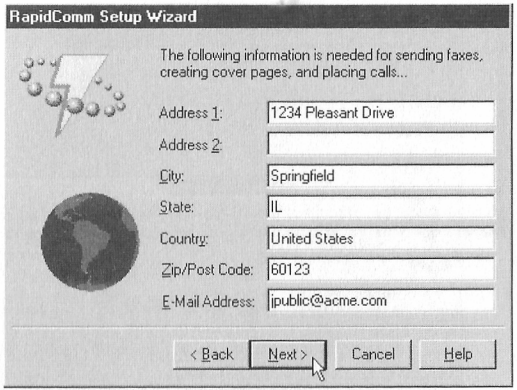
25. The following screen is the first screen of the RapidComm Setup Wizard. After you read the screen, click on the *Next* button.



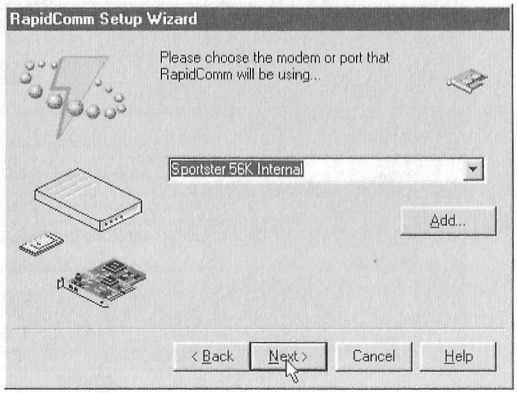
26. When you see this screen, you should only have to verify the information shown, and then fill in the *Data* box (if you have a third phone number just for your modem) and the *Local Area Code* box. Then click on the *Next* button.



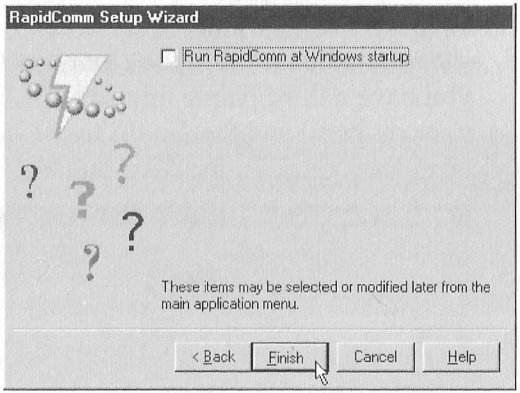
27. After you verify the information on this screen, click on the *Next* button.



28. When you see the following screen, make sure the correct modem is selected. Then click on the *Next* button.

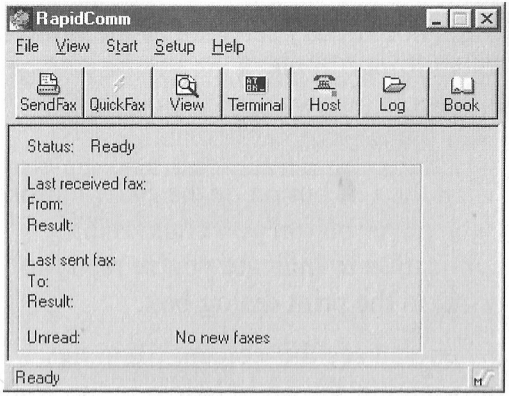


29. When you see this screen...

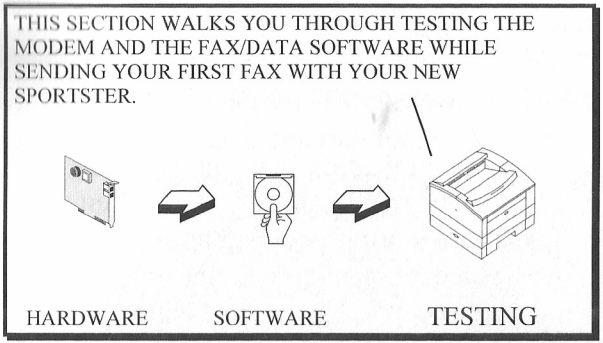


- If you want RapidComm to launch with every Windows startup, click on the box to the left of *Run RapidComm at Windows startup*. A check will appear in the box. Then click on the *Finish* button.
- If you do not want RapidComm to start every time you start Windows, simply click on the *Finish* button.

30. You will see this screen.



This is the main RapidComm screen. To send your first fax, keep this screen open. (After this initial run, RapidComm will not need to be running in order to send a fax.)

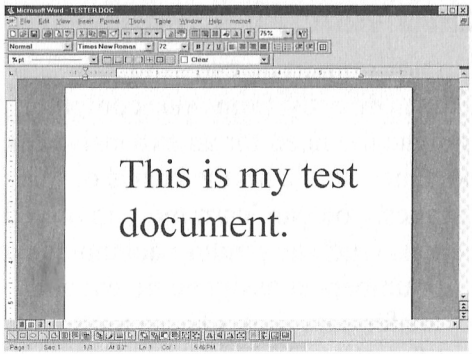


Sending Your First Fax

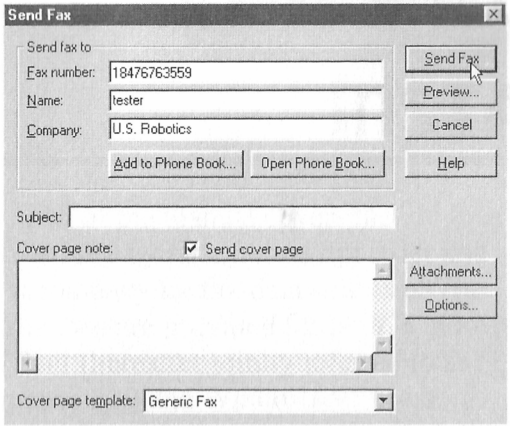
Using RapidComm, you can send and receive faxes directly from your computer and eliminate the need for an expensive fax machine. Once you learn the basics of sending faxes, you can learn more involved fax functions (such as sending documents to groups of numbers at assigned times) and how to transfer data files. (These more advanced functions are explained in the

electronic RapidComm manual that's on your *Connections* CD.) This chapter will walk you through sending your first fax.

1. Open an application in which you can create documents that you might want to fax (e.g. a word processing application). Create a document containing only a sentence or two. Name the document "tester". Keep the document open.



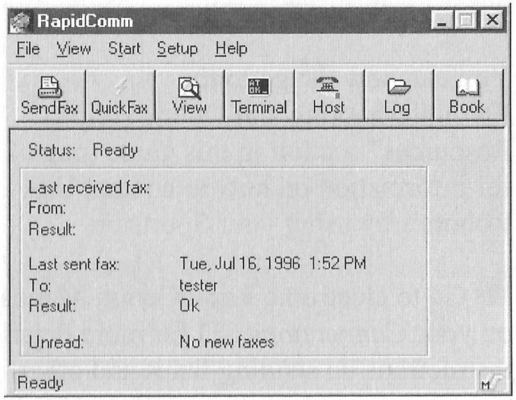
2. From the *File* menu, select *Print*.
3. If it's not already selected as the printer, select *RapidComm*. This can be changed in most Windows applications in the print dialog box.
4. Click the *OK* button or the *Print* button (whichever button you click in that application to indicate you're ready to print) in the print dialog box.
5. When you see this screen, fill in the information shown in below in the white boxes. For testing purposes, send your "tester" document to the U.S. Robotics fax number, 847-676-3559.



NOTE: If you have to dial a special prefix (such as 9) to connect to a telephone number outside of your building, make sure you type that prefix in before the telephone number.

When you've finished, click on the *Send Fax* button.

6. You will see a series of screens as the fax is being transmitted. When the fax has been successfully transmitted, you will see a screen that looks like this.



Congratulations—you are now ready to start using your Sportster!

You can now go to the "Troubleshooting and Online Help Resources" section in this guide (page 117) for information on how to contact U.S. Robotics by using your Sportster.

Go to electronic RapidComm Manual on your *Connections* CD for more detailed instructions on sending faxes and other things you can do with your Sportster and RapidComm.

PART II - EXTERNAL MODEM INSTALLATION

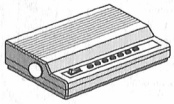
This part of the manual covers the installation of your external Sportster and the accompanying fax/data software. The instructions are provided for both Windows 3.1/ 3.11 (hereafter jointly referred to as Windows 3.x) and Windows 95 users. Please refer to the section dealing with the operating system you use. The two sections are:

Section A: External Installation with Windows 3.x (page 69)

Section B: External Installation with Windows 95 (page 89)

Section A: External Modem Installation with Windows 3.x

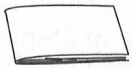
You'll need these items from your Sportster box:



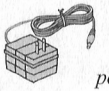
modem

phone cord

Connections CD



manual

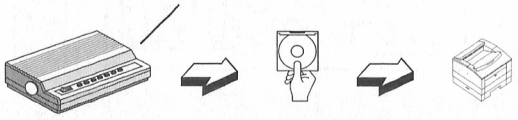


power adapter

Plus:

A serial cable. (This must be purchased separately. See column to the right.)

THIS FIRST SECTION WILL WALK YOU THROUGH THE STEPS INVOLVED IN CONNECTING YOUR SPORTSTER TO YOUR COMPUTER.

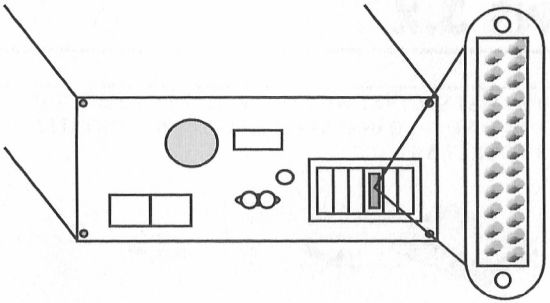


HARDWARE SOFTWARE TESTING

How to Determine Which Serial Cable to Buy

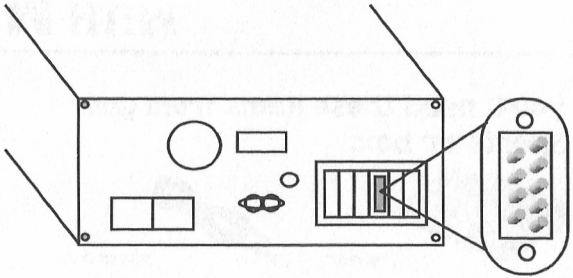
Before you can begin installation, you need to purchase an RS-232 serial cable. The following section will help you to determine which serial cable to purchase.

If your PC's serial connector looks like this



you need a shielded serial cable with a 25-pin female to 25-pin male connector.

If your PC's serial connector looks like this



you need a shielded serial cable with a 9-pin female to 25-pin male connector.

NOTE: Your computer's rear panel may not be identical to the diagrams above. However, you should look for connectors that match the enlarged portions of the diagrams. If you cannot locate the proper connector, refer to your computer's manual.

How to Hook Up the Modem

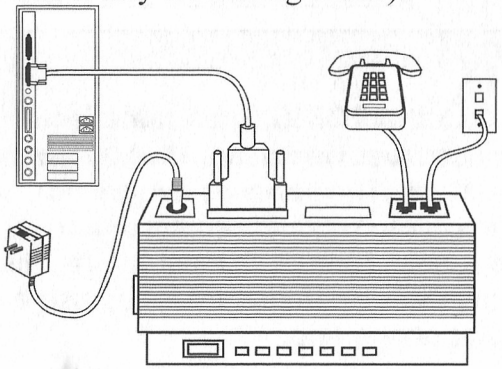
1. Turn off your computer and any attached devices, such as a printer.
2. Connect the serial cable to the modem and to the computer. When looking for the serial port label on the back of your computer, look for ports labeled COM, MODEM, RS-232, or SERIAL. **DO NOT** select AUX, GAME, LPT, or PARALLEL.

Note: Remember which serial port you selected. This information will be necessary when installing your communications software.

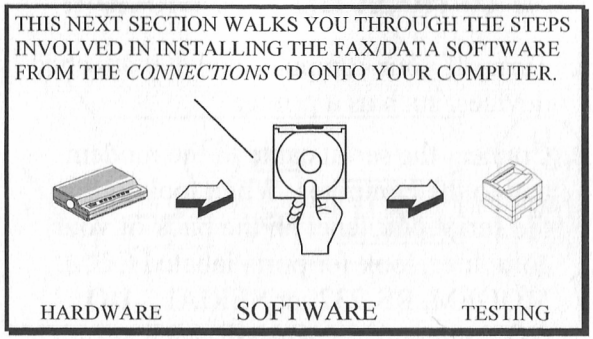
3. Plug the power adapter into the power jack on the modem and into a standard wall outlet.
4. Plug one end of the phone cord into the telephone jack (labeled with a wall plug icon on the bottom of the case) and the other end into a phone wall jack.

WARNING: The phone jack you use must be for an ANALOG phone line. Most office phones are wired through digital lines. Be sure you know what type of line you have. The modem will be damaged if you use a digital phone line.

5. If you wish to use your modem and phone through the same phone wall jack, plug your phone's cord into the modem's phone jack (labeled with a phone icon on the bottom of the case). Use an adapter cable if necessary. (NOTE: You cannot use the modem and phone at the same time if they are sharing a line.)



6. Turn your modem on.
7. Turn your computer on.
8. Start Windows.



Installing RapidComm with the Setup Wizard

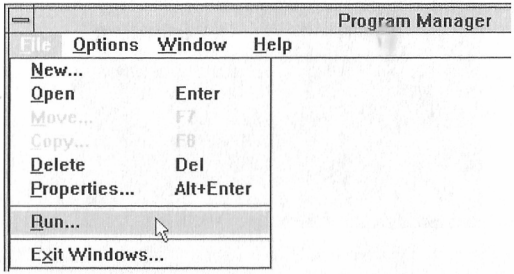
This section will walk you through the basics of running the U.S. Robotics Setup Wizard, which installs RapidComm (fax/data software) and other useful software programs. It also allows you to register your new Sportster modem.

RapidComm fax/data software simplifies sending and receiving faxes directly from your computer desktop. You can send faxes to specified groups of numbers after building your own fax directory and specify individual cover pages when necessary. And you can send individual faxes without exiting your word processing program.

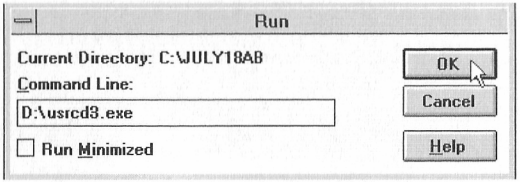
Additionally, the RapidComm fax/data software works with your modem to connect to BBSs, online services, and Internet providers. You can take advantage of this access to enter a new world of information and entertainment.

NOTE: If you have an older version of RapidComm installed on your system, uninstall it before continuing.

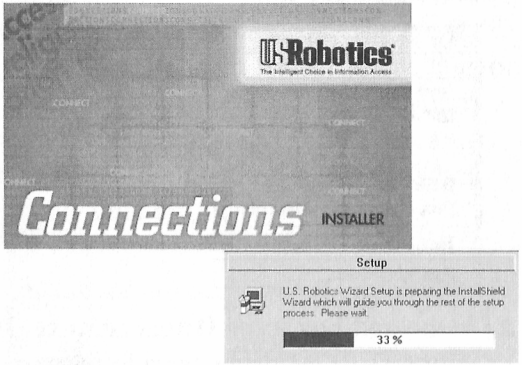
1. In Program Manager, click on the *File* menu and select *Run*.



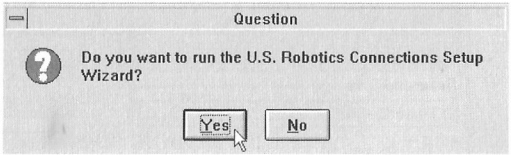
2. In the text box, type **D:\usrcd3.exe** (If your CD-ROM drive has a letter name other than **D**, type that letter in place of **D**.) Then click the *OK* button.



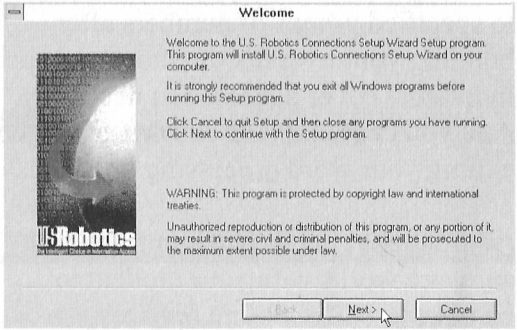
3. You will see a screen that looks like this.



4. After you read this screen, click on the *Yes* button.

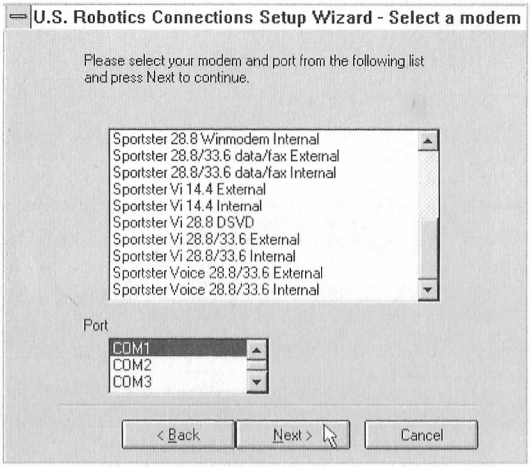


5. After reading the following screen, click on the *Next* button.

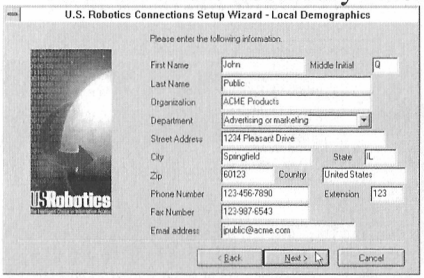


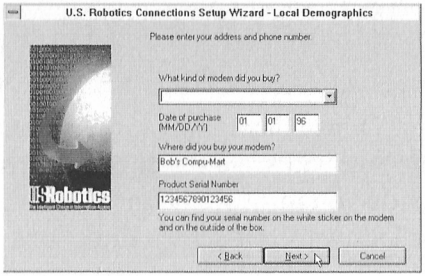
6. You will see this screen for a moment.

7. When you see this screen, select the correct modem and then click on the *Next* button.

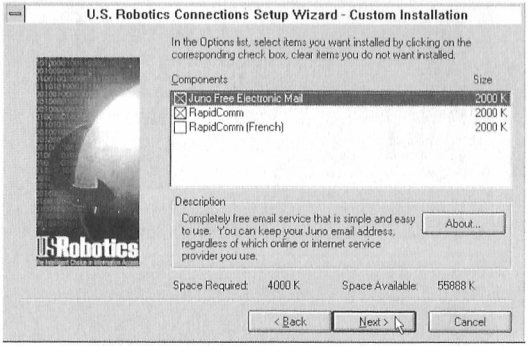


8. When you see the following two screens, fill in the blank boxes with the appropriate information, using the *Tab* key to move between fields. Click on each screen's *Next* button when you have filled in all of the necessary information.



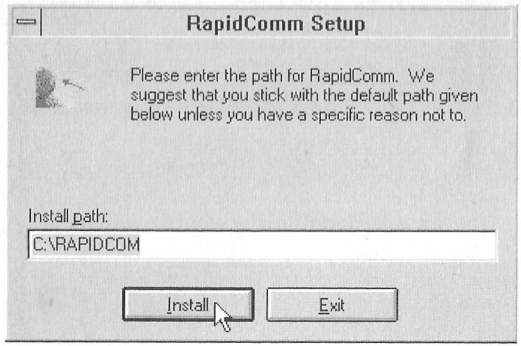


9. In the following screen, un-check any software you do not want by clicking on the name of the software. NOTE: Make sure you select the correct translation of RapidComm. Then click on the *Next* button.

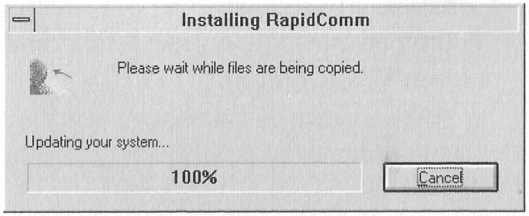


10. As the CD installs the software on your system, you will see a series of screens that guide you through the installation. Please follow the on-screen directions.

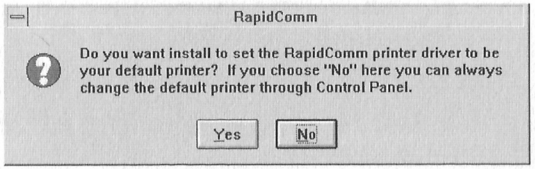
11. When you see this screen, click on the *Install* button, unless you want to copy the RapidComm files to a different directory. (Your screen may show a path that differs from what appears on the screen below.)



12. You will see this screen for a moment.

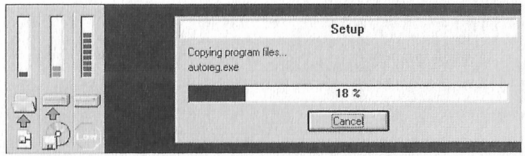


13. After you read this screen, click on either the *Yes* or *No* button.



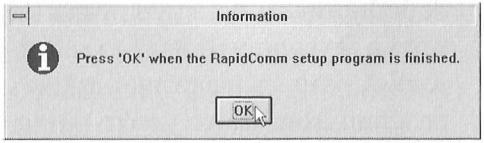
- If you click on the *Yes* button, every document you print will be treated as a fax unless you change the printer selection in the program from which you're trying to print.
- If you click on the *No* button, RapidComm will not be chosen as the default printer. When you want to send a fax, you will have to select RapidComm as the printer in the program from which you're trying to print.

14. You will see this screen for a moment.

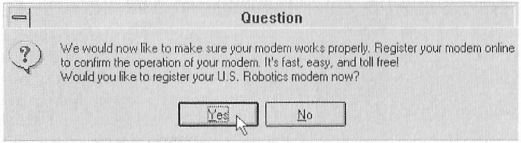


15. After you read this screen, click on the *OK* button.

16. After you read this screen, click on the *OK* button.

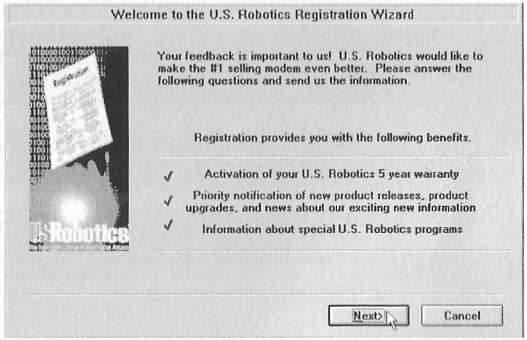


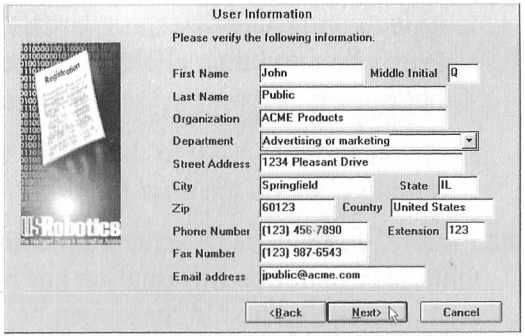
17. When you see this screen, we recommend you click on the *Yes* button.

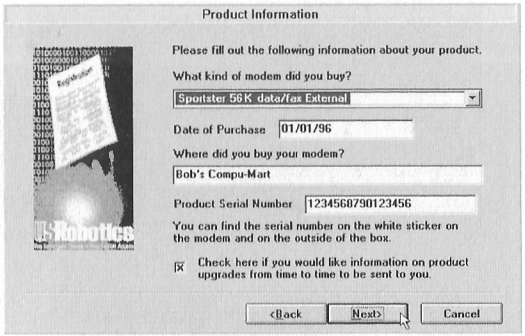


NOTE: If you click on "No," the registration screens will appear upon your next restart.

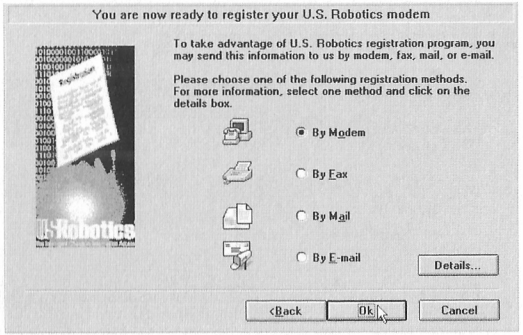
18. After you read the following three screens and verify that the information you typed earlier is correct, click on each screen's *Next* button.



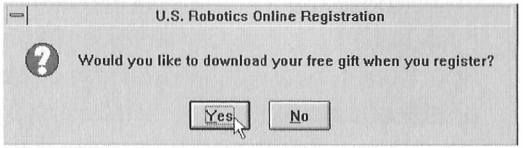




19. When you see this screen, *By Modem* will already be selected. We recommend you choose the *By Modem* option because it's a great way to try out your Sportster. Choose *By Modem* by clicking on the *OK* button.



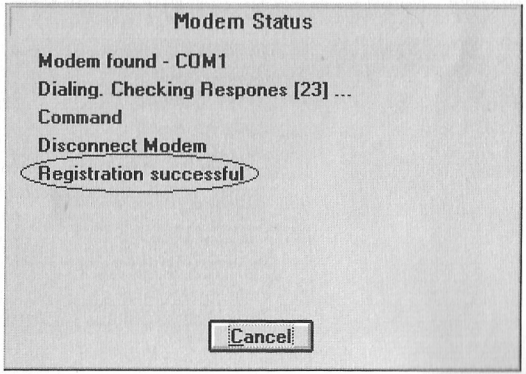
20. After you read this screen, we recommend you click on the *Yes* button.



21. When you see this screen

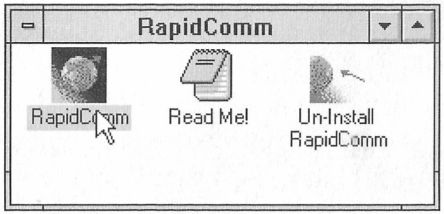
- If you have to dial a prefix (such as 9) to make a call outside your building, type the prefix before the 1 in the Prefix box and then click on the *Dial* button.
- If you do NOT have to dial a prefix, simply click on the *Dial* button.

22. Finally, you will see a screen indicating that the registration information has been sent (see circled text in the screen below).

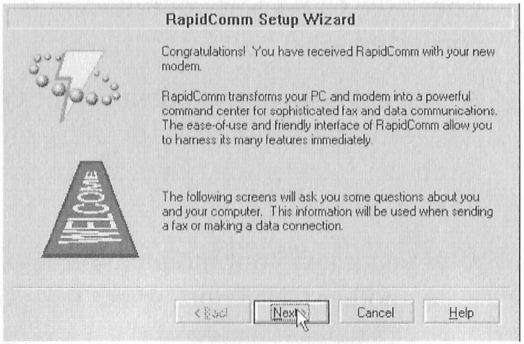


23. Restart Windows.

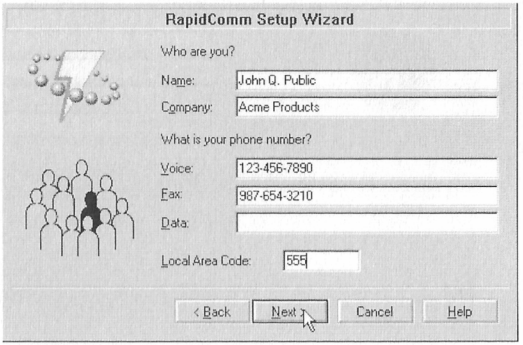
24. When you desktop appears, double-click on the RapidComm icon.



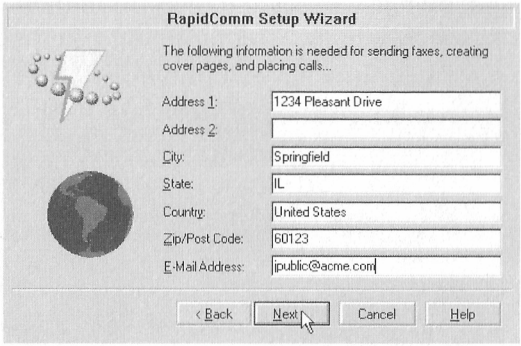
25. The following screen is the first in the RapidComm Setup Wizard. After you read this screen, click on the *Next* button.



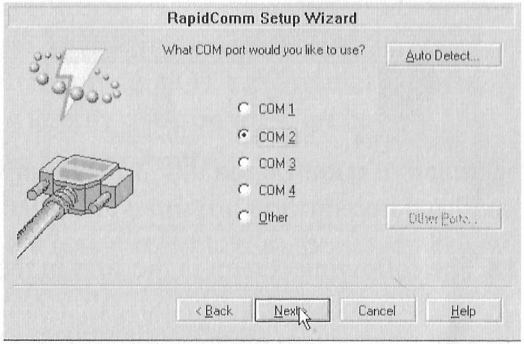
26. When you see this screen, you should only have to verify that the information shown is correct and then fill in the *Data* box (if you have a third phone number for your modem) and the *Local Area Code* box. Then click on the *Next* button.



27. After you verify the information on this screen, click on the *Next* button.



28. When you see this screen...

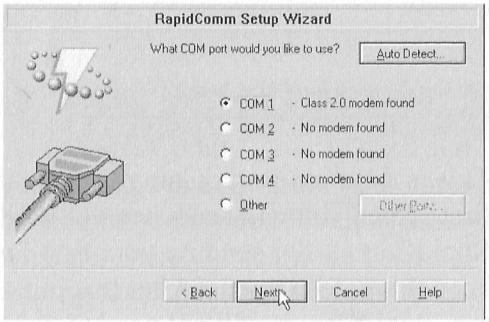


Check the COM port your modem is connected to.

- If you know your modem is on COM 2 (which is selected by default), click on the *Next* button. Then go to step 29.
- If you know your modem is connected to another COM port, select that port

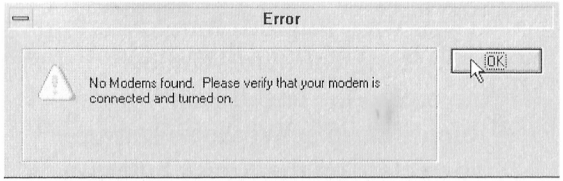
on screen and then click on the *Next* button. Then go to step 29.

- If you're not sure which port your modem is on, click on the *Auto Detect* button. The Auto Detect program will search your system to see which COM port your modem is attached to. You'll see a screen like this.



Click on the *Next* button. Then go to step 29.

- If you get this screen instead

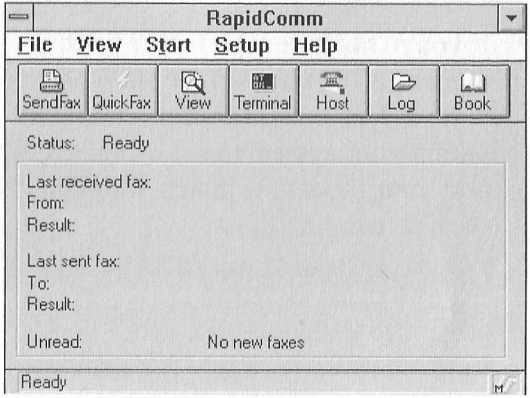


Go to the "Troubleshooting and Online Help Resources" section on page 117.

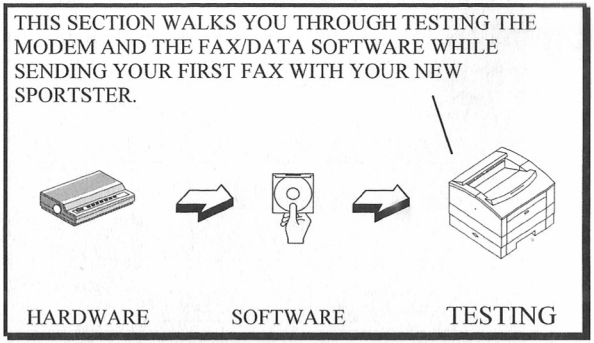
29. When you see this screen

- If you want RapidComm to start up every time you start Windows, select the box to the left of Run RapidComm at Windows startup. Then click on the *Finish* button.
- If you do not want RapidComm to start up every time you start Windows, simply click on the *Finish* button.

30. After a moment, you will see this screen.



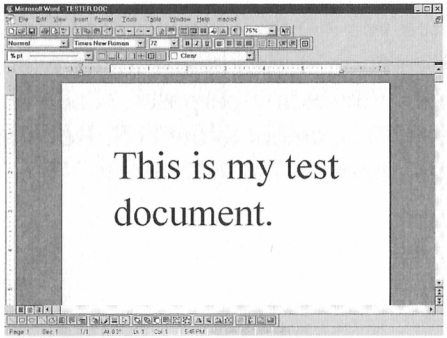
This is the main RapidComm screen, the first screen you will see when you start RapidComm. For sending your first fax, keep this screen open. (After this initial run, RapidComm will not need to be running in order to send a fax.)



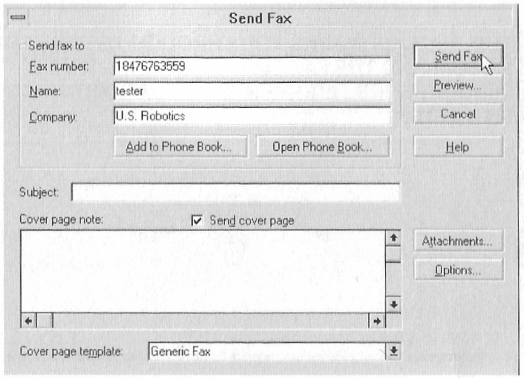
Sending Your First Fax

Using RapidComm, you can send and receive faxes directly from your computer and eliminate the need for an expensive fax machine. Once you learn the basics of sending faxes, you can learn more involved fax functions (such as sending documents to groups of numbers at assigned times) and learn how to transfer data files. These more advanced features are explained in the electronic RapidComm manual that's on your *Connections* CD. This section will walk you through sending your first fax.

1. Open an application in which you can create documents that you might want to fax (e.g. a word processing application). Create a document containing only a sentence or two. Name the document "tester". Keep the document open.



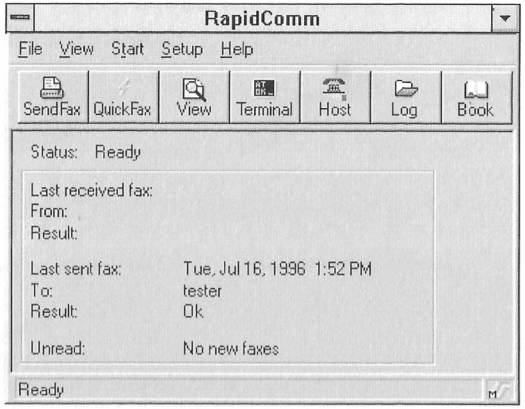
2. From the *File* menu, select *Print*.
3. If it's not already selected as the printer driver, select *RapidComm* as the printer. This can be changed in the *Control Panel* or in the print dialog box of most Windows applications.
4. Click on the *OK* button or the *Print* button (whichever button you click in that application to indicate you're ready to print) in the print dialog box.
5. When you see this screen, fill in the information shown below in the white boxes. For testing purposes, send your "tester" document to the U.S. Robotics fax number, 847-676-3559.



NOTE: If you have to dial a special prefix (such as 9) to connect to a telephone number outside of your building, make sure you type that prefix in before the telephone number.

When you've finished, click on the *Send Fax* button.

6. You will see a series of screens as the fax is being transmitted. When the fax has been successfully transmitted, you will see a screen that looks like this.



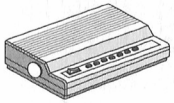
Congratulations—you are ready to start using your Sportster!

You can now go to the "Troubleshooting and Online Help Resources" section of this guide (page 117) for information on how to contact U.S. Robotics using your Sportster.

You can also go to the electronic RapidComm manual on your *Connections* CD for more detailed instructions on sending faxes and other things you can do with your Sportster and RapidComm.

Section B: External Modem Installation with Windows 95

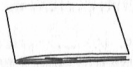
You'll need these items from your Sportster box:



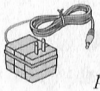
modem

phone cord

Connections CD



manual

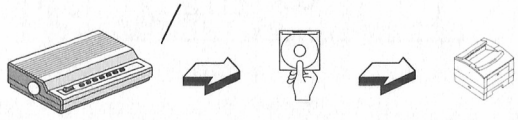


power adapter

Plus:

A serial cable. (This must be purchased. See column to the right.)

THIS FIRST SECTION WILL WALK YOU THROUGH THE STEPS INVOLVED IN CONNECTING YOUR SPORTSTER TO YOUR COMPUTER.

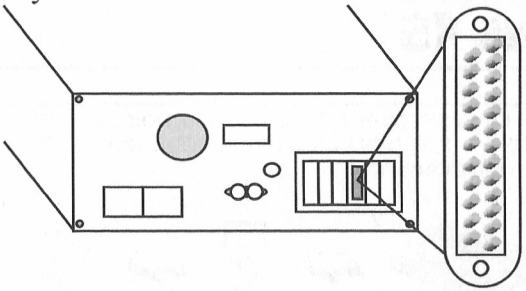


HARDWARE SOFTWARE TESTING

How to Determine Which Serial Cable to Buy

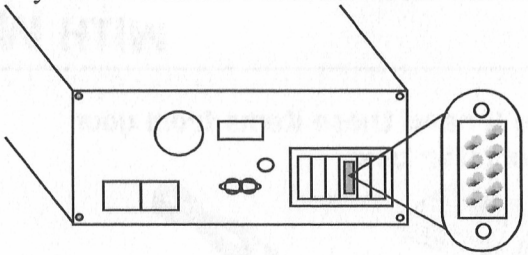
Before you can begin installation, you need to purchase an RS-232 serial cable. The following section will help you to determine which serial cable to purchase.

If your PC's serial connector looks like this



you need a shielded serial cable with a 25-pin female to 25-pin male connector.

If your PC's serial connector looks like this



you need a shielded serial cable with a 9-pin female to 25-pin male connector.

NOTE: Your computer's rear panel may not be identical to the diagrams above. However, you should look for connectors that match the exploded portions of the diagrams. If you cannot locate the proper connector, refer to your computer's manual.

How to Hook Up the Modem

1. Turn off your computer and any attached devices, such as a printer.
2. Connect the serial cable to the modem and to the computer. When looking for your serial port label on the back of your computer, select COM, MODEM, RS-232, or SERIAL. **DO NOT** select AUX, GAME, LPT, or PARALLEL.

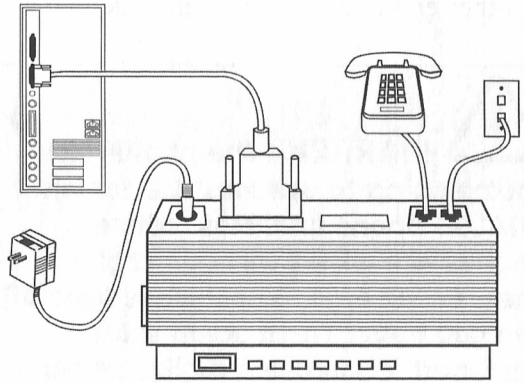
Note: Remember which serial port you selected. This information will be necessary when installing your communications software.

3. Plug the power adapter into the power jack and into a standard wall outlet.
4. Plug one end of the phone cord into the telephone jack (labeled with a wall plug icon on the bottom of the case) and the other end into a phone wall jack.

WARNING: The phone jack you're going to use must be for an ANALOG phone line. Most office phones are wired through digital lines. Be sure you know what type of line you have. The modem will be damaged if you use a digital phone line.

5. If you wish to use your modem and phone through the same phone wall jack, plug your phone's cord into the modem's phone jack (labeled with a phone icon on the bottom of the case). Use an adapter

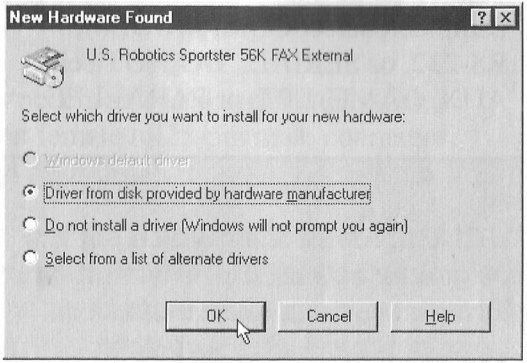
cable if necessary. (NOTE: You can not use the modem and phone at the same time if they share the same line.)



6. Turn your modem on.
7. Turn your computer on.
8. Start Windows.

How to Move Through the "New Hardware Found" Screens

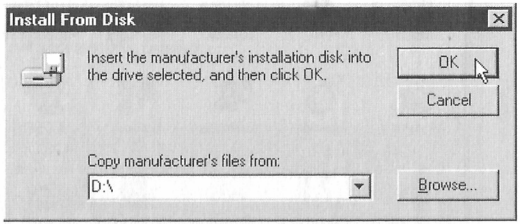
1. When Windows restarts, after about a minute you will see this screen pop up automatically.



If the *Driver from disk...* option is not already selected, select it.

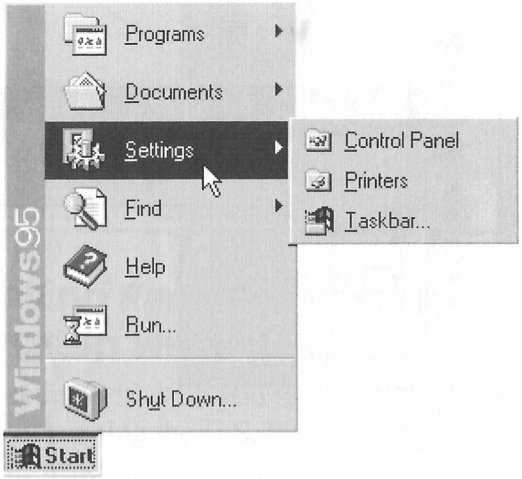
Click on the *OK* button.

2. Insert the *Connections* CD into your CD-ROM drive.
3. When you see this screen, type in **D:** to replace the **A:**. (If your CD-ROM drive has a different letter name, type that letter instead of **D**.)

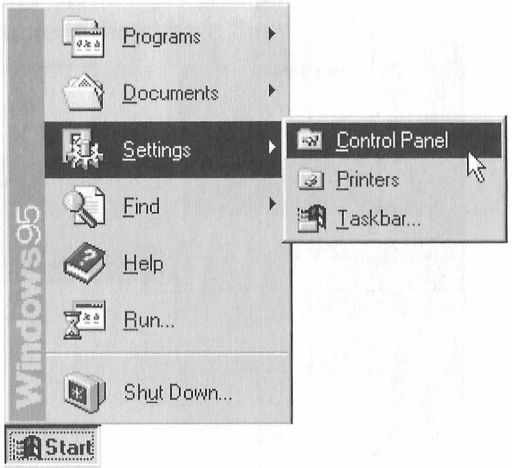


Click on the *OK* button.

4. When your desktop returns, click on the *Start* button and scroll up to *Settings*.

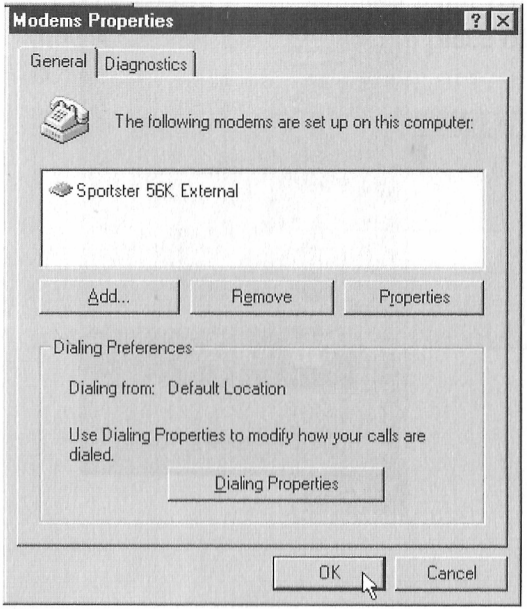


5. Scroll over to select *Control Panel.*

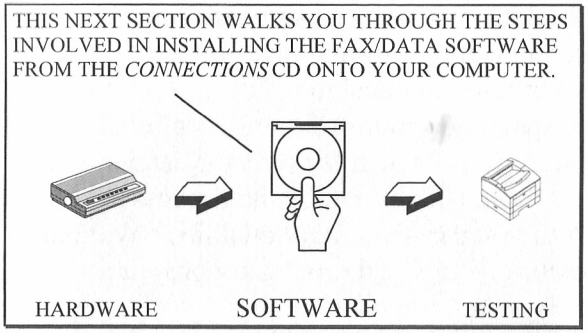


6. Double-click on the *Modems* icon.

7. In the Modem Properties screen, you should see *Sportster 56K External* listed.



Click the *OK* button.



Installing RapidComm with the Setup Wizard

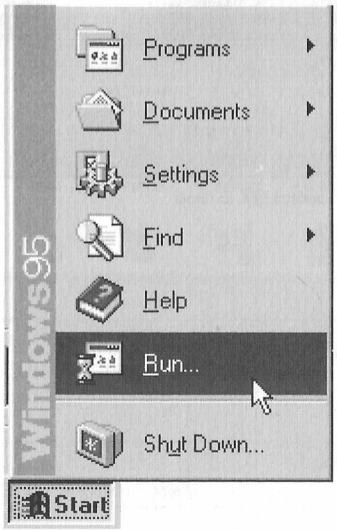
This section will walk you through the basics of running the U.S. Robotics Setup Wizard, which installs RapidComm (fax/data software) and other useful software programs. It also allows you to register your new Sportster modem.

RapidComm fax/data software simplifies sending and receiving faxes directly from your computer desktop. You can send faxes to specified groups of numbers after building your own fax directory and specify individual cover pages when necessary. And you can send individual faxes without exiting your word processing program.

Additionally, the RapidComm fax/data software works with your modem to connect to BBSs, online services, and Internet providers. Take advantage of this access to enter a new world of information and entertainment.

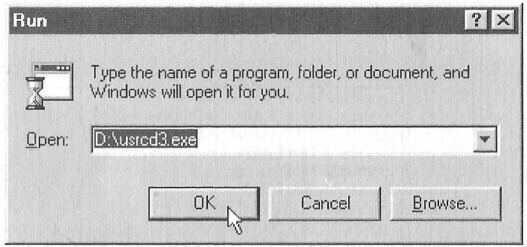
NOTE: If you have an older version of RapidComm installed on your system, uninstall it before continuing.

1. From the Windows 95 desktop, click on the *Start* button and then *Run.*

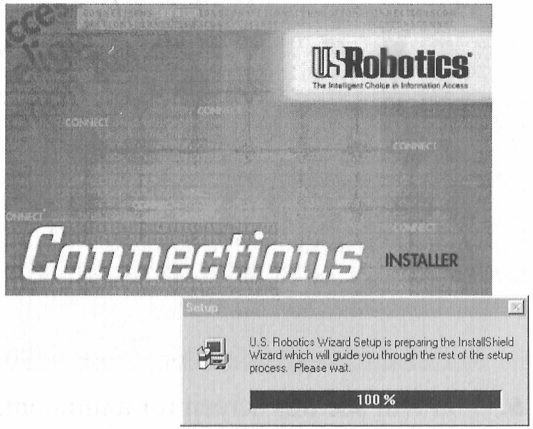


2. In the box, type **D:\usrcd3.exe**

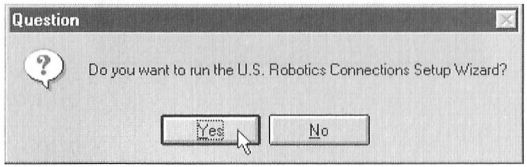
(If your CD-ROM drive has a letter name other than **D**, type that letter in place of **D**.)



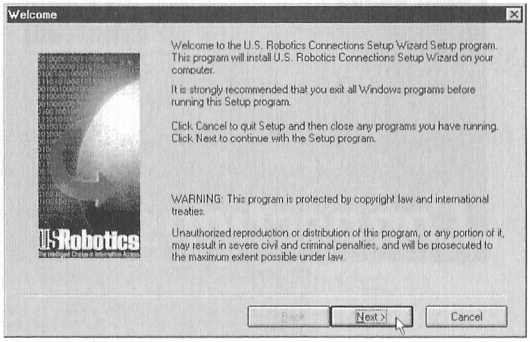
3. You will see a screen that looks like this.



4. After you read this screen, click on the *Yes* button.

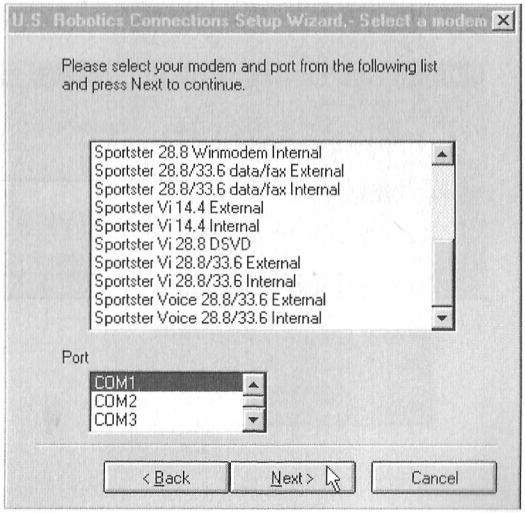


5. After you read this screen, click on the *Next* button.

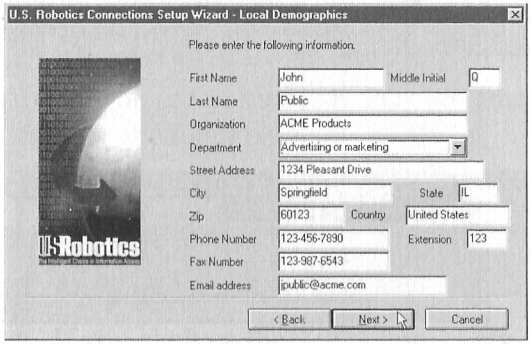


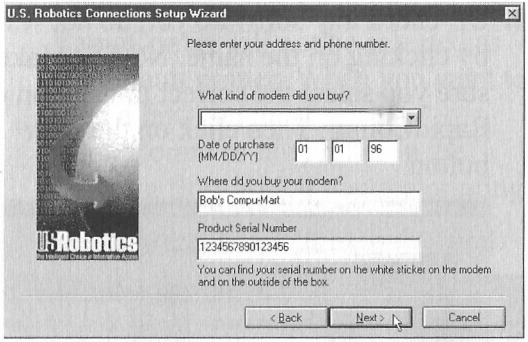
6. You will see this screen for a moment.

7. When you see this screen, select the correct modem and then click on the *Next* button.

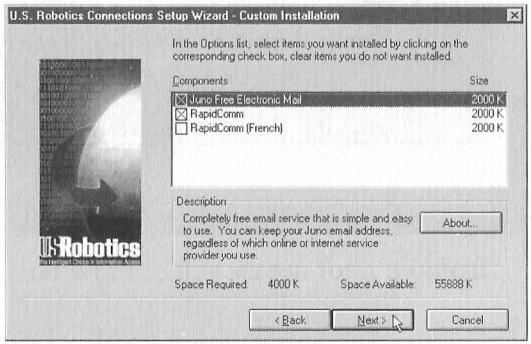


8. When you see the next two screens, fill in the blank boxes with the appropriate information, using the *Tab* key to move between fields. Click on each screen's *Next* button when you have filled in all of the necessary information.



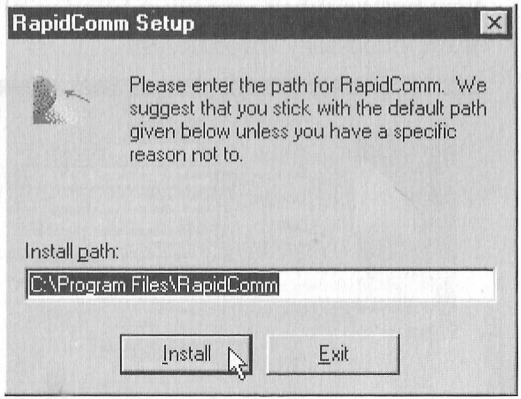


9. Un-check any software you do not want by clicking on the name. NOTE: Make sure you select the correct translation of RapidComm. Then click on the *Next* button.

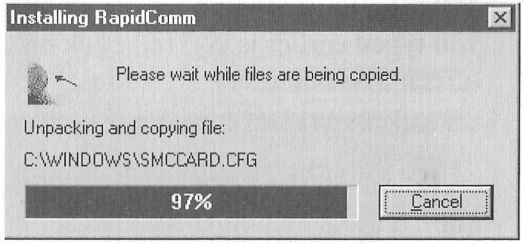


10. As the CD installs the software on your system, you will see a series of screens guiding you through the installation. Please follow the on-screen directions.

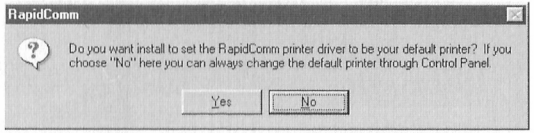
11. When you see this screen, click on the *Install* button, unless you want to copy the RapidComm files to a different directory.



12. You will see this screen for a moment.

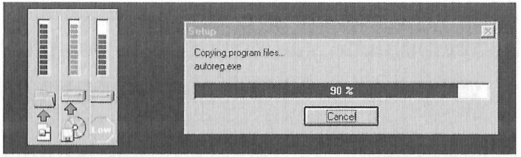


13. When you see this screen, click on either the *Yes* or *No* button.

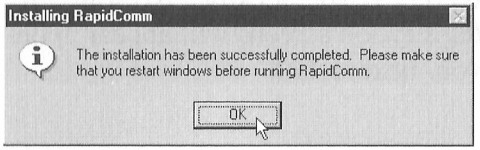


- If you click on the *Yes* button, every document you print will be treated as a fax unless you change the printer selection in the program from which you are printing.
- If you click on the *No* button, RapidComm will not be selected as the default printer. When you want to send a fax, you must select RapidComm as the printer in the program from which you are printing.

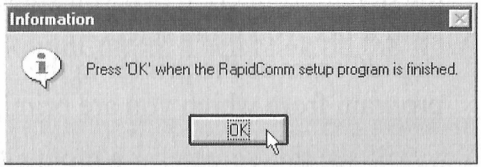
14. You will see this screen for a moment.



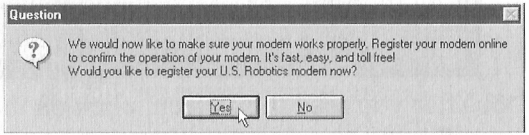
15. After you read this screen, click on the *OK* button.



16. After you read this screen, click on the *OK* button.

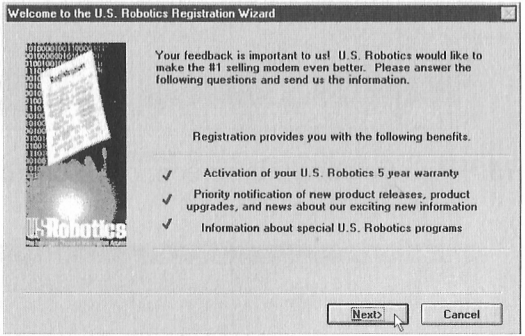


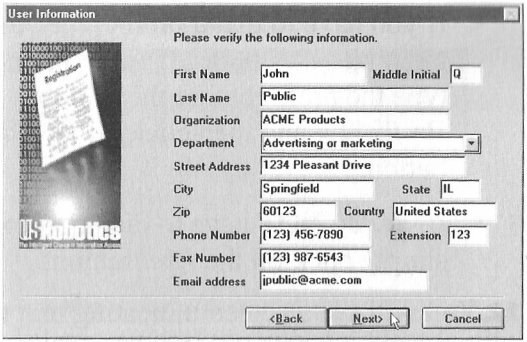
17. After you read this screen, we recommend you click on the *Yes* button.

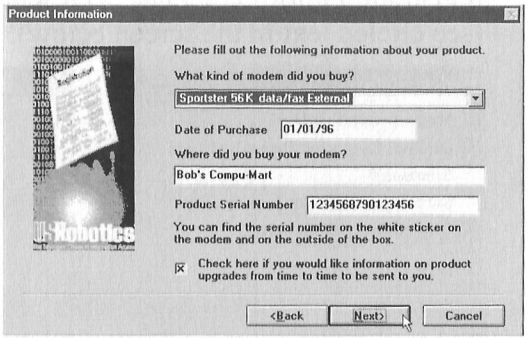


NOTE: If you click on "No," the registration screens will appear upon your next restart.

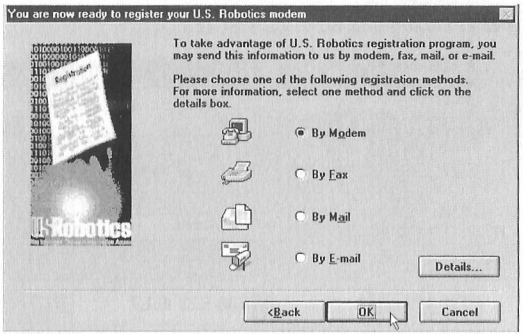
18. After you read the following three screens and verify that the information you typed earlier is correct, click on each screen's *Next* button.



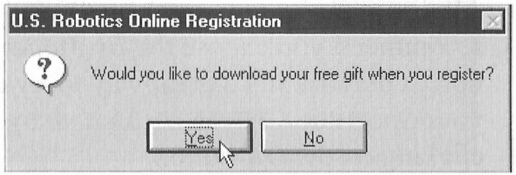




19. When you see this screen, you are ready to register your new Sportster. *By Modem* will already be selected. We recommend you choose the *By Modem* option because it's a great way to try out your Sportster. Choose *By Modem* by clicking on the *OK* button.



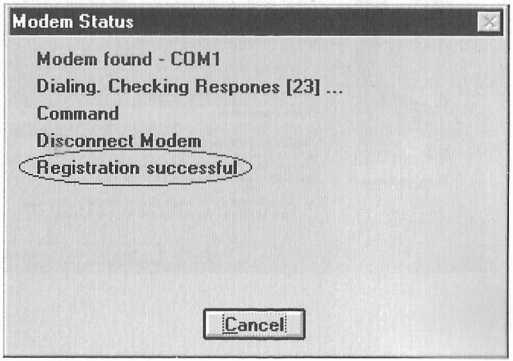
20. After you read this screen, we recommend you click on the *Yes* button.



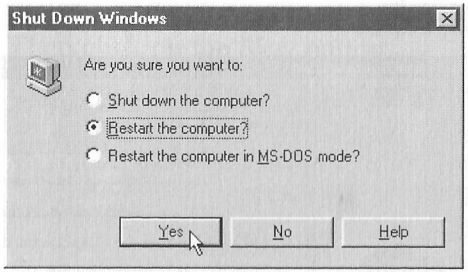
21. When you see this screen...

- If you have to dial a prefix (such as 9) to make a call outside your building, type the prefix before the 1 in the *Prefix* box and then click on the *Dial* button.
- If you do NOT have to dial a prefix, simply click on the *Dial* button.

22. You will see a screen indicating that the registration information has been sent (see circled text in the screen below).



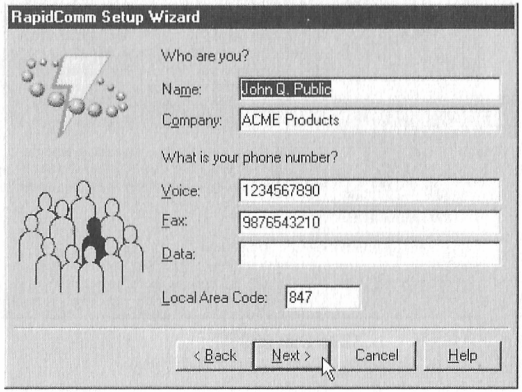
23. Restart Windows.



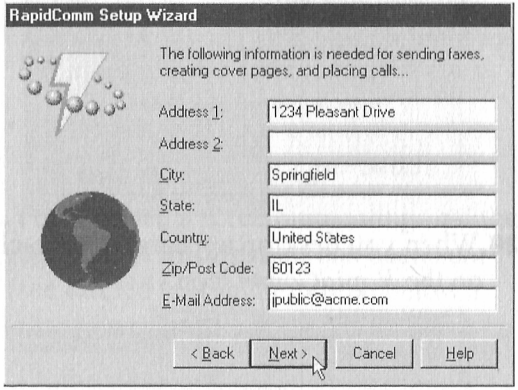
24. When you desktop appears, double-click on the *RapidComm* icon.

25. The following screen is the first screen of the RapidComm Setup Wizard. After you read the screen, click on the *Next* button.

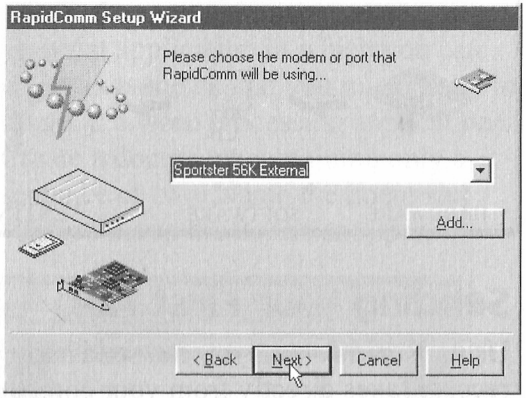
26. When you see this screen, you should only have to verify the information shown, and then fill in the *Data* box (if you have a third phone number just for your modem) and the *Local Area Code* box. Then click on the *Next* button.



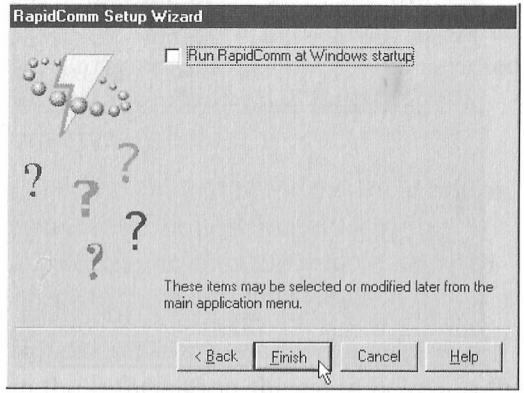
27. After you verify the information on this screen, click on the *Next* button.



28. When you see the following screen, make sure the correct modem is selected. Then click on the *Next* button.

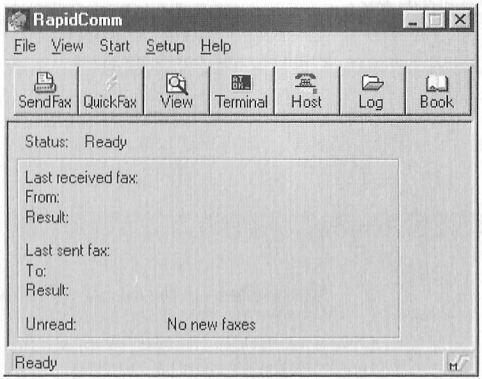


29. When you see this screen...

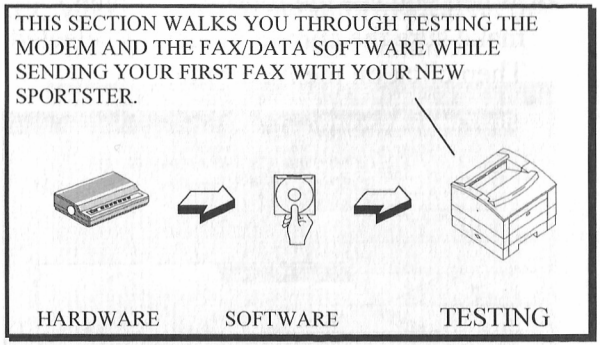


- If you want RapidComm to launch with every Windows startup, click on the box to the left of *Run RapidComm at Windows startup*. A check will appear in the box. Then click on the *Finish* button.
- If you do not want RapidComm to start every time you start Windows, simply click on the *Finish* button.

30. You will see this screen.



This is the main RapidComm screen. To send your first fax, keep this screen open. (After this initial run, RapidComm will not need to be running in order to send a fax.)

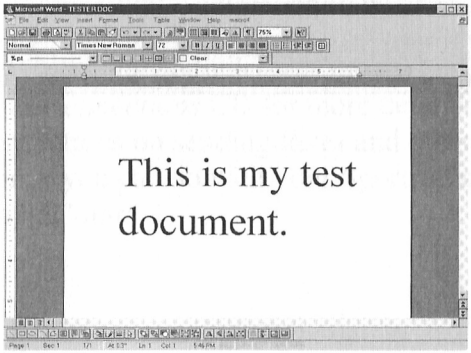


Sending Your First Fax

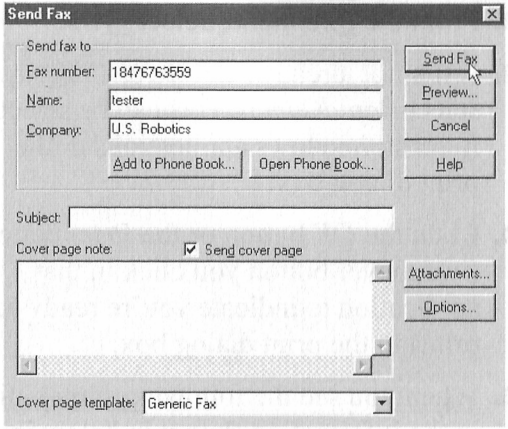
Using RapidComm, you can send and receive faxes directly from your computer and eliminate the need for an expensive fax machine. Once you learn the basics of sending faxes, you can learn more involved fax functions (such as sending documents to groups of numbers at assigned times) and how to transfer data files. These more advanced functions are explained in the

electronic RapidComm manual that's on your *Connections* CD. This chapter will walk you through sending your first fax.

1. Open an application in which you can create documents that you might want to fax (e.g. a word processing application). Create a document containing only a sentence or two. Name the document "tester." Keep the document open.



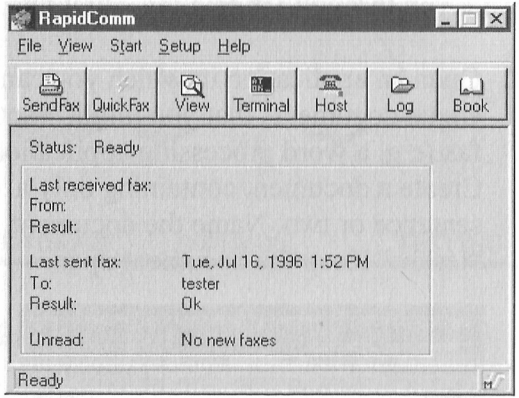
2. From the *File* menu, select *Print.*
3. If it's not already selected as the printer, select *RapidComm.* This can be selected in most Windows applications in the print dialog box.
4. Click the *OK* button or the *Print* button (whichever button you click in that application to indicate you're ready to print) in the print dialog box.
5. When you see the following screen, fill in the information shown in below in the white boxes. For testing purposes, send your "tester" document to the U.S. Robotics fax number, 847-676-3559.



NOTE: If you have to dial a prefix (such as 9) to connect to a telephone number outside of your building, make sure you type that prefix in before the telephone number.

When you've finished, click on the *Send Fax* button.

6. You will see a series of screens as the fax is being transmitted. When the fax has been successfully transmitted, you will see a screen that looks like this.



Congratulations—you are now ready to start using your Sportster!

You can now go to the "Troubleshooting and Online Help Resources" section in this guide (page 117) for information on how to contact U.S. Robotics by using your Sportster.

Go to electronic RapidComm manual on your *Connections* CD for more detailed instructions on sending faxes and other things you can do with your Sportster and RapidComm.

Part III - Beyond Setup

This part includes information which may not be necessary for installing your modem or the fax/data software included with it, but will help to expand your knowledge of the modem and its capabilities. The sections are:

Section A: Installing Other Fax/Data Software (page 115)

Section B: Troubleshooting and Online Help Resources (page 117)

Section C: Glossary (page 131)

Section D: Technical Quick Reference (page 141)

Section E: Regulatory Information (page 173)

Section A: Installing Other Fax/Data Software

You do not have to use the RapidComm fax/data software included with your new Sportster. Your modem has been designed and tested using a wide range of communications software packages on the market. This section will walk you through some of the details you may need to know when installing other communications software packages.

Type of Modem

Most communications software programs will ask you to select the type of modem you are using. Select a *U.S. Robotics Sportster high speed modem.* If that selection is not listed, pick *Courier Dual Standard, V.32bis,* or *V. 34.*

KEY POINT: Refer to the manual that came with your software for its installation instructions. The software's installation program will ask you questions about the modem you are using.

Initialization String

For hardware flow control, a fixed serial port rate and full result codes type:

AT&F1<Enter>

If you must use software flow control, type:

AT&F2<Enter>

Flow Control

- For hardware flow control (highly recommended), select *RTS/CTS.*
- For software flow control, select *XON/XOFF.*

NOTE: Disable the type of flow control (hardware or software) that you are not using.

UART (External Modems Only)

1. In **DOS**, at the Windows directory type:
   MSD
2. At the next prompt, type:
   C

Find the ***UART Chip Used*** line and match it with the ***COM port*** column that your modem is attached to. That is your UART type.

If this is your UART...	Select this serial rate
16550*	115.2 or 57.6 Kbps
16450	38.4 Kbps
8250	19.2 Kbps

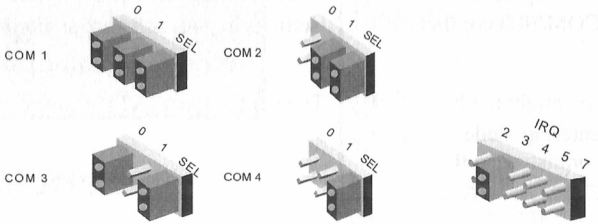
*All Sportster internal modems have a 16550 UART.

NOTE: DO NOT select a 28,800, 14,400, or 12,000 bps serial port rate if offered. Your modem will NOT work correctly with any of these settings. Fix or lock the serial port (baud) rate (if it's referred to as *autobaud*, select *OFF*).

SECTION B: TROUBLESHOOTING AND ONLINE HELP RESOURCES

PROBLEM	DIAGNOSIS	POSSIBLE SOLUTION
The computer or software will not recognize the modem.	Your modem might not be turned on.	Make sure the modem is turned on. The power switch is on top of external modems. The CS light on the front panel should be lit. If you installed an internal modem, it should power up when the computer is turned on.
	You may have a COM/IRQ conflict.	Check to make sure you have the correct COM port and IRQ settings in your software and/or in the Windows Control Panel.
	You might not be entering modem commands in the proper manner.	Type in all upper (AT) or lower (at) case.
	You may need to reset your COM and IRQ settings.	Refer to the Internal Modem Installation section or the diagram on the following page.
	If using an external modem, the COM port may not be enabled.	Refer to your computer's manual for information concerning enabling COM ports (usually involves altering the bios settings or motherboard jumpers).

PROBLEM	POSSIBLE SOLUTION
The computer or software will not recognize the modem.	To reset the COM port and IRQ settings, lift the black plastic shunts off the modem and replace the COM port shunt to 3 and the IRQ shunt to 5. Once you've changed the settings, be sure to make the same changes to your software and Windows settings. The illustration below shows various COM port and IRQ settings. If the computer or software still will not recognize the modem after these changes are made, try using a different software application.



POWER USER TIP: Running a self-diagnostics test on your computer is an easy way to figure out whether or not you have a COM port/IRQ conflict. Go to the DOS or Windows directory located on your boot disk (typically C:\) and type MSD. From here, type Q to see the IRQ (Interrupt Request) information. Note the COM port and IRQ your modem is using. If your modem is sharing an IRQ with another device, you need to assign it to another IRQ through your software and Windows settings.

PROBLEM	DIAGNOSIS	POSSIBLE SOLUTION
The modem displays double characters on your monitor.	Both the modem and software's local character echoes are probably turned on.	You can turn the local echo off on the modem by typing **ATEO** <enter> in your software's terminal mode. To turn the local echo off in the software, refer to your software's documentation.
The modem won't go off hook to dial or doesn't answer the phone.	You might have a bad phone cord connection to your modem.	Make sure the phone cord is connected to the jack on the modem labeled TELCO on one end and to the wall phone jack at the other end.
	The software you are using might not have auto answer enabled.	Check to make sure the auto answer feature is enabled. In RapidComm, type **ATS0=1** in terminal mode.
Both modems exchange carrier signals but fail to establish a link.	You may have a poor line connection.	Try placing the call again. The phone company routes calls differently each time.

PROBLEM	DIAGNOSIS	POSSIBLE SOLUTION
Your modem won't connect at 2400 bps with a 2400 bps modem.	The modem you're trying to connect with could be an older model that doesn't support error control.	You can disable error control on your modem with the following command entered in the terminal mode: **AT&M0** <Enter>. Now try placing the call to the remote modem again. When finished, reset your modem to enable the error control features. Type **ATZ** <Enter> in terminal mode.
Your screen keeps displaying random garbage characters.	You could have a conflict with the remote modem's settings for work length, parity, and stop bits.	Set your modem's word lengths, parity, and stop bits the same as the remote modem or BBS you are calling.
	Your software and modem might not be set to the same flow control settings.	Make sure the software and modem have the same flow control rate settings.
	The best flow control settings might not be enabled on your modem.	Type this command in terminal mode to load the optimal settings: **AT&F1 <enter>.**

PROBLEM	DIAGNOSIS	POSSIBLE SOLUTION
Your communications software is reporting many cyclic redundancy check (CRC) errors and low characters per second (CPS).	You may have a bad phone line.	Try placing the call again. The phone company routes calls differently each time.
	Optimum flow control settings may not be enabled on your modem.	Type this command in terminal mode to load the optimum settings: **AT&F1 <enter>**.
	The serial port rate in your communications software may be set too high for your modem's UART or your area's phone lines.	Lower the serial port rate in your communications software to 38,400 bps or 19,200 bps.
	The remote site you are dialing into may have trouble with the file transfer protocol.	Try using a different file transfer protocol. Do not use Xmodem if other protocols are available.
	There may be a Terminate and Stay Resident (TSR) program running in the background, interfering with data communications.	Disable any TSR programs running in the background.

PROBLEM	DIAGNOSIS	POSSIBLE SOLUTION
Errors are constantly occurring in your V.17 fax transmissions.	Your modem initialization string could be insufficient for fax transmissions.	Enter the following initialization string in your software setup screen: **AT&H3&I2&R2S7=90**.
	You could have a disruptive Terminate and Stay Resident (TSR) program running in your background.	Disable any Terminate and Stay Resident (TSR) programs running in the background.
	You could have an outdated comdriver on your system.	Load the comdriver that came with your fax software. This may require you to re-install your internal modem.
RapidComm fails to initialize the modem.	Your baud rate may be set too high.	Lower baud rate to 9600.
	RapidComm's port settings may be incorrect.	Make sure RapidComm's port settings are correctly set for your system..

Internal Modem Users Only

If you use DOS 6.0's DoubleSpace program, you may want to do the following before running any fax software.

1. Open the Windows SYSTEM.INI file.
2. Add the following line under the [386 Enh] header:

   EMMEXCLUDE=C800-D1FF

When you are finished, reboot your computer.

If You Are Running DOS 6.0 or Higher

You may want to run the MEMMAKER DOS program before you run your fax software. Run the program MEMMAKER.EXE from the DOS directory prompt. This program loads all of your Terminate and Stay Resident (TSR) programs in the most efficient order.

NOTE: Type VER at the DOS prompt if you are unsure which version of DOS you are using.

Online Help Resources

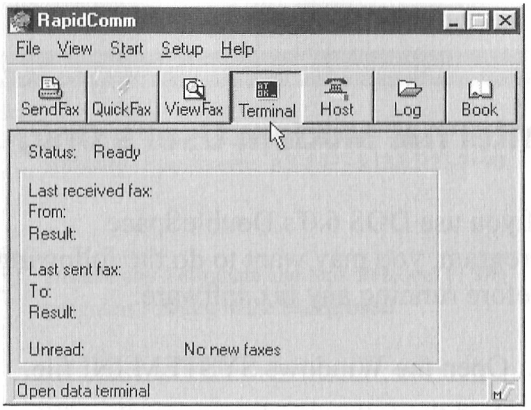
Connecting to the U.S. Robotics BBS

To connect to the U.S. Robotics Bulletin Board System, follow these steps:

1. Start RapidComm. The software settings for the BBS are:

   ANSI terminal emulation
   Data Bits: 8
   Parity: None
   Stop Bits: 1

2. Put RapidComm in Terminal mode by clicking on the *Terminal* button.

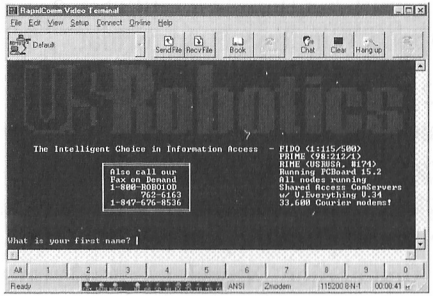


3. Enter the following command: **ATDS0 <Enter>**

NOTE: ATDS0 automatically dials 1-847-982-5092, the U.S. Robotics BBS.

If this is your first time connecting to our BBS, you will be asked to enter your name

and a password and to fill out a questionnaire.

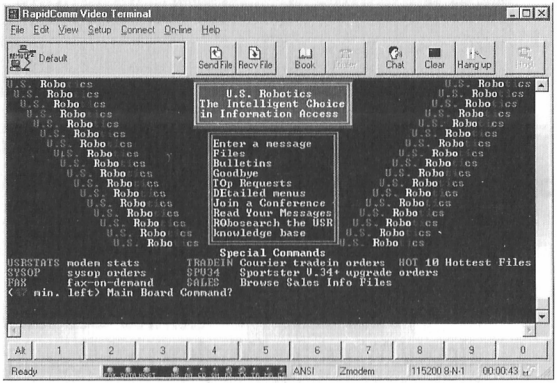


The preceding screen shot is what the introduction screen of the U.S. Robotics BBS will look like. Follow the on-screen prompts to enter your name and other relevant information to register your Video Modem and have access to the BBS library. The library contains hundreds of helpful files and tips to make using your modem and computer a breeze.

Downloading the Technical Reference Guide

To download the Technical Reference Guide, follow these steps:

1. From the main menu, select **D** for Download a file.



(This is what the main menu will look like.)

2. A *Filename to Download:* text box appears on the screen.

3. Type the name of the file you wish to receive. You have three manual formats from which to choose:

   - x2_WORD.ZIP—The Guide in a zipped Word for Windows v6.0 format. You will need PKUNZIP.EXE to uncompress this file. PKUNZIP.EXE is also available on the BBS.
   - x2_HELP.ZIP—The Guide in a zipped Windows Help format.
   - x2_ASCI.TXT—The Guide in an uncompressed ASCII format.

4. *Protocol Type for Transfer.* Your selection depends on what your software supports. If possible, make Zmodem your first choice. Xmodem should be your last choice since it is very slow.
5. Depending on the software you are using, you will either be prompted where you want the file placed, or the file will be placed in the directory where your communications software is loaded.
6. When the file transfer is complete, and you are ready to leave the BBS, select **G** for Good-bye from the main menu.

U.S. Robotics offers a number of other online technical support options. Choose any one of the following if you need help with your new Sportster or want to learn more about it.

Internet FTP

Provides free library containing the same files as the BBS site. FTP to **ftp.usr.com.**

Internet on Demand

Provides automatic technical support through a library containing product information, quick reference cards, and installation help. To obtain an index of available documents, send a blank e-mail to **support@usr.com**. To have a document e-mailed to you, send a document's 3-digit number as the subject.

World Wide Web

A U.S. Robotics Home Page containing the same information as the Internet on Demand listing as well as information about U.S. Robotics. Log on to **http://www.usr.com**.

CompuServe

Access the same information as the Internet FTP site. Connect through the **Modem Vendor** Forum or e-mail us through CompuServe Mail for a response within 24 hours. Modem vendor forum address is **GO USROBOTICS**, Modem Vendor Section **#4**. Address message to **76711,707**.

America Online

Connect to U.S. Robotics through America Online. Go to the **Keyword** field and type

USROBOTICS to connect to the U.S. Robotics BBS.

Fax and Technical Support Hotline

Technical questions about U.S. Robotics modems can also be answered via fax or by technical support representatives.

Fax **(847) 676-7323**
Hotline **(847) 982-5151**

Priority "No Hold" Service

U. S. Robotics also staffs its own 900 toll number for immediate assistance. These lines are staffed from 8 a.m. - 6 p.m. CST Monday through Friday.

"No Hold" line **900-555-USR1**

Are You Still Having Problems?

- Review this manual.
- Call or visit your modem dealer. They will be able to give you assistance. This is much more efficient and time-saving than returning the modem to U.S. Robotics.
- If your dealer can't help you, contact U.S. Robotics Customer Support. When you call, specify your modem serial number (found on the modem and on the outside of the box), the software being used, and, if possible, the contents of your ATI7 screen.

If You Must Return the Modem to Us

Contact U.S. Robotics Customer Support. If the support representative determines that you need to return the modem, you will receive an SRO (Service Repair Order) number. You must have an SRO number

before returning the modem to us. Ship the unit, postage paid, in a strong box made of corrugated cardboard with plenty of packing material. Include your SRO number, name, and address on the shipping label as well as inside the package.
Ship to the following address:

Technical Support Department
SRO#
U.S. Robotics, Inc.
8100 N. McCormick Blvd.
Skokie, IL 60076-2999

RapidComm Troubleshooting Tips

PROBLEM: *The lights in RapidComm's modem light monitor do not correspond to the modem's actual lights.*
DIAGNOSIS: Under certain circumstances, the modem light monitor does not correctly report the activity of the modem. We are aware of this problem and are working to rectify the situation in upcoming versions of the software.

PROBLEM: *The station ID works intermittently.*
DIAGNOSIS: Under certain circumstances (including receiving a fax), the station ID may not work properly.

PROBLEM: *RapidComm does not work properly at 115.2 Kbps.*
DIAGNOSIS: The presence of disk compression software on your system hampers RapidComm's ability to work properly at 115.2 Kbps. Removal of the disk compression software from your system will allow RapidComm to operate at 115.2 Kbps.

A Note to User's with Older Versions of RapidComm on Their Systems

You must uninstall older versions of RapidComm from your system before installing the most recent version (contained on the CD-ROM that came with your new 56K modem). Otherwise you may introduce conflicts in your system that will hamper RapidComm's ability to work properly.

SECTION C: GLOSSARY

Cross references are printed in **boldface**. Cross references with items in the Command Summary, found in the Technical Quick Reference (Section D), are printed in *italics*.

analog loopback
A modem self-test in which data from the keyboard or an internal test pattern is sent to the modem's transmitter, turned into analog form, looped back to the receiver, and converted back into digital form.

analog signals
A variety of signals and wavelengths that can be transmitted over communications lines such as the sound of a voice over the phone line. Contrast with **digital signals**.

answer mode
The mode used by your modem when answering an incoming call from an originating modem. The transmit/receive frequencies are the reverse of the originating modem, which is in **originate mode**.

application
A computer program designed to perform a specific function, such as a word processing or organizing data into a spreadsheet.

ARQ
Automatic Repeat reQuest. A general term for a function that automatically allows your modem to detect flawed data and retransmit it. See **MNP** and **V.42**.

ASCII
American Standard Code for Information Interchange. A code used to represent letters, numbers, and special **characters** such as $, !, and /.

asynchronous transmission
Data transmission in which the length of time between transmitted **characters** may vary. Because the time lapses between transmitted characters are not uniform, the receiving modem must be signaled as to when the data bits of a character begin and when they end. The addition of **start/stop bits** to each character serves this purpose.

Auto Answer
Sets the modem to pick up the phone line when it detects a certain number of rings. See S-register S0 in the "Technical Quick Reference."

auto dial
A process where your modem dials a call for you. The dialing process is initiated by sending an *ATDT* (dial tone) or *ATDP* (dial pulse) command followed by the telephone number to dial. Auto dial is used to dial voice numbers. See command *Dn*.

baud rate
A term used to measure the speed of an analog transmission from one point to another. Although not technically accurate, baud rate is commonly used to mean **bit rate**.

binary digit
A 0 or 1, reflecting the use of the binary numbering system. Used because the computer recognizes either of two states, OFF or ON. Shortened form of binary digit is bit.

bit rate
Also referred to as transmission rate. The number of **binary digits**, or bits, transmitted per second (**bps**). Communications channels using telephone channel modems are established at set bit rates, commonly 2400, 4800, 9600, 14,400, 28,800 and higher.

bits per second (bps)
The bits (**binary digits**) per second rate. Thousands of bits per second are expressed as kilobits per second or Kbps.

buffer
A memory area set aside to be used as temporary storage during input and output operations. An example is the modem's command buffer.

byte
A group of **binary digits** stored and operated upon as a unit. In user documentation, the term usually refers to 8-bit units or **characters**. One kilobyte (KB) is equal to 1,024 bytes or characters; 640 KB indicates 655,360 bytes or characters.

carrier
A tone signifying a connection the modem can alter to communicate data across telephone lines.

character
A representation, coded in **binary digits**, of a letter, number, or other symbol.

characters per second (CPS)
A data transfer rate generally estimated from the **bit rate** and the **character** length. For example, at 2400 bps, 8-bit characters with **start/stop bits** (for a total of ten bits per character) will be transmitted at a rate of approximately 240 characters per second (cps). Some **protocols**, such as error-control protocols, employ advanced techniques such as longer transmission **frames** and **data compression** to increase cps.

class 1 and 2.0
International standards used between fax **application** programs and faxmodems for sending and receiving faxes.

cyclic redundancy checking (CRC)
An error-detection technique consisting of a test performed on each block or **frame** of data by both sending and receiving modems. The sending modem inserts the results of its tests in each data block in the form of a CRC code. The receiving modem compares its results with the received CRC code and responds with either a positive or negative acknowledgment.

data communications
A type of communications in which computers are able to exchange data over an electronic medium.

data compression table
A table containing values assigned for each **character** during a call under **MNP**5 data compression. **Default** values in the table are continually altered and built during each call: The longer the table, the more efficient **throughput** gained.

data mode
The mode in which the faxmodem is capable of sending and receiving data files. A standard modem without fax capabilities is always in data mode.

DCE
Data Communications (or Circuit-Terminating) Equipment, such as dial-up modems that establish and control the data link via the telephone network.

default
Any setting assumed, at startup or reset, by the computer's software and attached devices. The computer or software will use these settings until changed by the user or other software.

detect phase
In the **ITU-T** V.42 error-control **protocol**, the first stage in establishing if both modems attempting to connect have **V.42** capability.

dictionary
The term used for compression codes built by the **V.42** ***bis*** data compression algorithm.

digital loopback
A test that checks the modem's RS-232 interface and the cable that connects the **terminal** or computer and the modem. The modem receives data (in the form of **digital signals**) from the computer or terminal, and immediately returns the data to the screen for verification.

digital signals
Discrete, uniform signals. In this manual, the term refers to the **binary digits** 0 and 1. Contrast with **analog signals**.

DTE
Data **Terminal** (or Tterminating) Equipment. A computer that generates or is the final destination of data.

duplex
Indicates a communications channel capable of carrying signals in both directions. See **half duplex**, **full duplex**.

Electronic Industries Association (EIA)
Group which defines electronic standards in the U.S.

error control
Various techniques that check the reliability of **characters** (**parity**) or blocks of data. **V.42** and **MNP** error-control **protocols** use error detection (**CRC**) and retransmission of flawed **frames** (**ARQ**).

facsimile
A method for transmitting the image on a page from one point to another. Commonly referred to as fax.

fax mode
The mode in which the faxmodem is capable of sending and receiving files in a **facsimile** format. See definitions for **V.17, V.27ter, V.29**.

flow control
A mechanism that compensates for differences in the flow of data into and out of a modem or other device. See commands *&Hn, &In, &Rn.*

frame
A **data communications** term for a block of data with header and trailer information attached. The added information usually includes a frame number, block size data, error-check codes, and Start/End indicators.

full duplex
Signal will flow in both directions at the same time over one line. In microcomputer communications, may refer to the suppression of the online **local echo**.

half duplex
Signals will flow in both directions, but only one way at a time. In microcomputer communications, may refer to activation of the online **local echo**, which causes the modem to send a copy of the transmitted data to the screen of the sending computer.

Hz
Hertz, a frequency measurement unit used internationally to indicate cycles per second.

ITU-T
An international organization that defines standards for telegraphic and telephone equipment. For example, the Bell 212A standard for 1200-bps communication in North America is observed internationally as ITU-T **V.22**. For 2400-bps communication, most U.S. manufacturers observe V.22 bis. The initials ITU-T represent the French name. In English it is known as the International Telegraph and Telephone Consultative Committee.

LAPM
Link Access Procedure for Modems. An error-control **protocol** defined in **ITU-T** Recommendation V.42. Like the **MNP** protocols, LAPM uses **cyclic redundancy checking (CRC)** and retransmission of corrupted data (**ARQ**) to ensure data reliability.

local echo
A modem feature that enables the modem to display keyboard commands and transmitted data on the screen. See command *En*.

MNP
Microcom Networking Protocol, an error-control **protocol** developed by Microcom, Inc., and now in the public domain. There are several different MNP protocols, but the most commonly used one ensures error-free transmission through error detection (**CRC**) and retransmission of erred **frames**.

modem
A device that transmits/receives computer data through a communications channel such as radio or telephone lines. It also changes signals received from the phone line back to **digital signals** before passing them to the receiving computer.

nonvolatile memory (NVRAM)
User-programmable random access memory whose data is retained when power is turned off. On the Sportster, it includes four stored phone numbers and the modem settings.

off/on hook
Modem operations that are the equivalent of manually lifting a phone receiver (taking it off-hook) and replacing it (going on-hook).

online fall back/fall forward
A feature that allows high-speed, error-control modems to monitor line quality and fall back to the next lower speed in a defined range if line quality diminishes. As line conditions improve, the modems switch up to the next higher speed.

originate mode
The mode used by your modem when initiating an outgoing call to a destination modem. The transmit/receive frequencies are the reverse of the called modem, which is in **answer mode**.

parity
A simple error-detection method that checks the validity of a transmitted **character**. Character checking has been surpassed by more reliable and efficient forms of error checking, including **V.42** and **MNP 2-4 protocols**. Either the same type of **parity** must be used by two communicating computers, or both may omit parity.

protocol
A system of rules and procedures governing communications between two or more devices. Protocols vary, but communicating devices must follow the same protocol in order to exchange data. The format of the data, readiness to receive or send, error detection and error correction are some of the operations that may be defined in protocols.

RAM
Random Access Memory. Memory that is available for use when the modem is turned on, but that clears of all information when the power is turned off. The modem's RAM holds the current operational settings, a **flow control buffer**, and a command **buffer**.

remote digital loopback
A test that checks the phone link and a remote modem's transmitter and receiver.

remote echo
A copy of the data received by the remote system, returned to the sending system, and displayed on the screen. Remote echoing is a function of the remote system.

ROM
Read Only Memory. Permanent memory, not user-programmable.

serial transmission
The consecutive flow of data in a single channel. Compare to parallel transmissions where data flows simultaneously in multiple channels.

start/stop bits
The signaling bits attached to a **character** before and after the character is transmitted during **asynchronous transmission**.

terminal
A device whose keyboard and display are used for sending and receiving data over a communications link. Differs from a microcomputer or a mainframe in that it has little or no internal processing capabilities.

terminal mode
Software mode that allows direct communication with the modem. Also known as command mode.

throughput
The amount of actual user data transmitted per second without the overhead of **protocol** information such as **start/stop bits** or **frame** headers and trailers. Compare with **characters per second**.

V.8
The **ITU-T** standard specification that covers the initial handshaking process.

V.17 fax
An **ITU-T** standard for making **facsimile** connections at 14,400 bps, ,12,000 bps, 9,600 bps, 7,200 bps.

V.21
An **ITU-T** standard for modems operating in asynchronous mode at speeds up to 300 bps, **full-duplex**, on public switched telephone networks.

V.22
An **ITU-T** standard for modem communications at 1200 bps, compatible with the Bell 212A standard observed in the U.S. and Canada.

V.22 bis
An **ITU-T** standard for modem communications at 2400 bps. The standard includes an automatic link negotiation fallback to 1200 bps and compatibility with Bell 212A/V.22 modems.

V.27 ter
An **ITU-T** standard for **facsimile** operations that specifies modulation at 4800 bps, with fallback to 2400 bps.

V.29
An **ITU-T** standard for **facsimile** operations that specifies modulation at 9600 bps, with fallback to 7200 bps.

V.32
An **ITU-T** standard for modem communications at 9600 bps and 4800 bps. V.32 modems fall back to 4800 bps when line quality is impaired.

V.32 bis
An **ITU-T** standard that extends the V.32 connection range: 4800, 7200, 9600, 12,000, and 14,400 bps. V.32 *bis* modems fall back to the next lower speed when line quality is impaired, fall back further as necessary, and also fall forward (switch back up) when line conditions improve (see **online fall back/fall forward**).

V.34
An **ITU-T** standard that currently allows data rates as high as 28,800 bps.

V.34+
An enhancement to **V.34** that enables data transfer rates as high as 33,600 bps.

V.42
An **ITU-T** standard for modem communications that defines a two-stage process of detection and negotiation for **LAPM error control**.

V.42 bis
An extension of **ITU-T** V.42 that defines a specific data compression scheme for use during V.42 connections.

Xmodem
The first of a family of **error control** software **protocols** used to transfer files between modems. These protocols are in the public domain and are available from many bulletin board services.

XON/XOFF
Standard **ASCII** control **characters** used to tell an intelligent device to stop/resume transmitting data.

Ymodem
An error-checking **protocol** that can send several files of data at a time in 1024-**byte** (1K) blocks. This protocol can use either checksums or CRC for error checking.

Ymodem G
Similar to **Ymodem**, except it includes no error checking, which makes it faster.

Zmodem
Similar to **Xmodem** and **Ymodem**, except it includes batch transfer, the ability to recover from a partially complete transfer, an autostart feature, and improved efficiency.

SECTION D: TECHNICAL QUICK REFERENCE

This section includes information about:

- *Front Panel Lights*
- *Command Summary*
- *Dip Switches*
- *S-Registers*
- *The Serial Interface (cable information)*

Front Panel Lights (external modems)

Symbol	Meaning	Status
AA	Auto Answer	Answer mode: ON when register S0 is set to 1 or higher (Auto Answer), and when answering a call; OFF when modem originates a call. Light flashes when there is an incoming call.
CD	Carrier Detect	ON if modem receives a valid data signal (carrier) from a remote modem, indicating that data transmission is possible. Always ON if CD override is ON (&C0).
RD	Received Data	Flashes when modem sends result codes or passes received data bits from remote.
SD	Send Data	Flashes when computer sends a data bit to modem.
TR	Data Terminal Ready	ON if modem receives a DTR signal from computer. Always ON (modem ignores DTR) if the DTR override is ON (&D0).
CS	Clear to Send	ON until modem lowers CTS when Transmit Data hardware flow control is enabled (&H1, &H3).
ARQ/ FAX	Error Control/ Fax Operations	Data Mode: Automatic Repeat Request. ON if modem is set to &M4 or &M5 and successfully establishes an error control connection. Flashes when modem retransmits data to remote modem. Fax Mode: Flashes to indicate fax mode.

Command Summary

- Type commands in either upper or lower case, not a combination. Use the Backspace key to delete errors. (You cannot delete the original AT command since it is not stored in the modem buffer.)
- If a command has numeric options and you don't include a number, zero is assumed. For example, if you type ATB, the command ATB0 is assumed.
- Every command except A/ and +++ must begin with the AT prefix and be entered by pressing **<Enter>**.
- The maximum command length is 58 characters. The modem doesn't count the AT prefix, carriage returns, or spaces.

Note: All defaults are based on the &F1—Hardware Flow Control template loaded in NVRAM when the modem is shipped. Defaults are listed in *italics*.

Command Set

$ Use in conjunction with *D*, *S*, or *&* commands (or just AT) to display a basic command list; online help.

A Manual Answer: goes off hook in answer mode. Pressing any key aborts the operations.

A/ Re-executes the last issued command. Used mainly to redial. This does not require the AT prefix or a Carriage Return.

Any key Aborts off-hook dial/answer operation and hangs up.

AT Required command prefix, except with A/ and +++. Use alone to test for OK result code.

B*n* **U.S./ITU-T answer sequence.**

- *B0* *ITU-T answer sequence*
- B1 U.S. answer tone

D*n* **Dials the specified phone number. Includes the following:**

- L Dials the last dialed number.
- P Pulse (rotary) dial
- R Originates call using answer (reverse) frequencies.

Sn Dials the phone number string stored in NVRAM at position n (n = 0–3). Phone numbers are stored with the &Zn=s command.

T Tone dial

, (Comma) Pause, See S8 definition; which it's linked to.

; (Semicolon) Return to Command mode after dialing.

" Dials the letters that follow (in an alphabetical phone number).

! (Exclamation point) Flashes the switch hook.

/ Delays for 125 ms. before proceeding with dial string.

W Wait for second dial tone (X2 or X4); linked to S6 register.

@ Dials, waits for quiet answer, and continues (X3 or higher).

$ Displays a list of Dial commands.

E*n* **Sets local echo.**

E0 Echo OFF

E1 *Modem displays keyboard commands*

F*n* **Sets online local echo of transmitted data ON/OFF.**

F0 Local echo ON. Modem sends a copy of data it sends to the remote system to your screen.

F1 *Local echo OFF. Receiving system may send a remote echo of data it receives.*

H*n* **Controls ON/OFF hook.**

H0 Hangs up (goes on hook).

H1 Goes off hook.

I*n* **Displays the following information.**

I0 Four-digit product code

I1 Results of ROM checksum

I2 Results of RAM checksum

I3 Product type

I4 Current modem settings

I5 Nonvolatile memory (NVRAM) settings

I6 Link diagnostics

I7 Product configuration

L*n* **Controls speaker volume (internals only).**

L0 Low volume

L1 Low volume

L2 *Medium volume*

L3 High volume

M*n* **Operates speaker.**

- M0 Speaker always OFF.
- *M1* *Speaker ON until CONNECT.*
- M2 Speaker always ON.
- M3 Speaker ON after dial, until CONNECT.

O*n* **Returns online.**

- O0 Returns online.
- O1 Returns online and retrains.

P **Sets pulse dial (for phone lines that don't support touch-tone dialing).**

Q*n* **Displays/suppresses result codes.**

- *Q0* *Displays result codes.*
- Q1 Quiet mode; no result codes.
- Q2 Displays result codes only in Originate mode.

S*r.b=n* **Sets bit *.b* of register *r* to *n* (0/OFF or 1/ON).**

S*r=n* **Sets register *r* to *n*.**

S*r*? **Displays contents of S-Register *r*.**

S$ **Displays a list of the S-Registers.**

T **Sets tone dial.**

V*n* **Displays verbal/numeric result codes.**

- V0 Numeric codes
- *V1* *Verbal codes*

X*n* Sets result code displayed. Default is X4.

Result Codes	X*n* Setting X0	X1	X2	X3	X4
0/OK	•	•	•	•	•
1/CONNECT	•	•	•	•	•
2/RING	•	•	•	•	•
3/NO CARRIER	•	•	•	•	•
4/ERROR	•	•	•	•	•
5/CONNECT 1200		•	•	•	•
6/NO DIAL TONE			•		•
7/BUSY				•	•
8/NO ANSWER*				•	•
9/Reserved					
10/CONNECT 2400		•	•	•	•
11/RINGING					•
13/CONNECT 9600		•	•	•	•
18/CONNECT 4800		•	•	•	•
20/CONNECT 7200		•	•	•	•
21/CONNECT 12000		•	•	•	•
25/CONNECT 14400		•	•	•	•
43/CONNECT 16800		•	•	•	•
85/CONNECT 19200		•	•	•	•
91/CONNECT 21600		•	•	•	•
99/CONNECT 24000		•	•	•	•
103/CONNECT 26400		•	•	•	•
107/CONNECT 28800		•	•	•	•
151/CONNECT 31200		•	•	•	•

Xn *(continued)*

Xn	Result Codes (cont.)	X0	X1	X2	X3	X4
	155/CONNECT 33600	•	•	•	•	•
	180/CONNECT 33333	•	•	•	•	•
	184/CONNECT 37333	•	•	•	•	•
	188/CONNECT 41333	•	•	•	•	•
	192/CONNECT 42666	•	•	•	•	•
	196/CONNECT 44000	•	•	•	•	•
	200/CONNECT 45333	•	•	•	•	•
	204/CONNECT 46666	•	•	•	•	•
	208/CONNECT 48000	•	•	•	•	•
	212/CONNECT 49333	•	•	•	•	•
	216/CONNECT 50666	•	•	•	•	•
	220/CONNECT 52000	•	•	•	•	•
	224/CONNECT 53333	•	•	•	•	•
	228/CONNECT 54666	•	•	•	•	•
	232/CONNECT 56000	•	•	•	•	•
	236/CONNECT 57333	•	•	•	•	•
	Adaptive Dialing			•	•	•
	Wait for 2nd Dial Tone (W)			•		•
	Wait for Answer (@)				•	•
	Fast Dial			•		•

*Requires @ in dial string; replaces NO CARRIER

Y*n* **Selects power-on/reset default configuration.**

- *Y0* *Default is profile 0 setting in NVRAM*
- Y1 Default is profile 1 setting in NVRAM

Z **Resets modem.**

- Z0 Resets modem to NVRAM profile selected by Y command or dip 7.
- Z1 Resets modem to NVRAM profile 0
- Z2 Resets modem to NVRAM profile 1
- Z3 Resets modem to factory default profile 0 (&F0)
- Z4 Resets modem to factory default profile 1 (&F1)
- Z5 Resets modem to factory default profile 2 (&F2)

&A **Displays a list of ampersand (&) commands. &A*n* enables/disables additional result code subsets (see X*n*).**

- &A0 ARQ result codes disabled
- &A1 ARQ result codes enabled
- &A2 V.32 modulation indicator added
- *&A3* *Protocol indicators added—LAPM/MNP/NONE*

*(error control) and V42*bis*/MNP5 (data compression)*

&B*n* Manages modem's serial port rate.

- &B0 Variable, follows connection rate
- *&B1 Fixed serial port rate*
- &B2 Fixed in ARQ mode, variable in non-ARQ mode

&C*n* Controls Carrier Detect (CD) signal.

- &C0 CD override
- *&C1 Normal CD operations*

&D*n* Controls Data Terminal Ready (DTR) operations.

- &D0 *DTR override*
- &D1 DTR toggle causes online *Command* mode
- *&D2* Normal DTR operations
- &D3 Resets on receipt of DTR

&F*n* Loads a read-only (non-programmable) factory configuration.

- &F0 Generic template
- *&F1 Hardware flow control template*
- &F2 Software flow control template

&G*n* Sets Guard Tone.

- *&G0 No guard tone, U.S. and Canada*

&G1 550 Hz guard tone, some European countries, requires B0 setting.
&G2 1800 Hz guard tone, U.K., requires B0 setting.

&H*n* Sets Transmit Data (TD) flow control (see also &R*n*).

&H0 Flow control disabled
&H1 Hardware flow control, Clear to Send (CTS)
&H2 Software flow control, XON/XOFF
&H3 Hardware and software flow control

&I*n* Sets Receive Data (RD) software flow control (see also &R*n*).

&I0 Software flow control disabled
&I1 XON/XOFF signals to your modem and remote system
&I2 XON/XOFF signals to your modem only

&K*n* Enables/disables data compression.

&K0 Data compression disabled
&K1 Auto enable/disable
&K2 Data compression enabled
&K3 MNP5 compression disabled

&M*n* **Sets Error Control (ARQ) for connections at 1200 bps and higher.**

- &M0 Normal mode, error control disabled
- &M1 Reserved
- &M2 Reserved
- &M3 Reserved
- *&M4 Normal/ARQ*
- &M5 ARQ mode

&N*n* **Sets connect speed. If connection cannot be established at this speed, the modem will hang up. Sets ceiling connect speed if &U*n* is greater than 0. See &U*n*.**

- *&N0 Variable rate*
- &N1 300 bps
- &N2 1200 bps
- &N3 2400 bps
- &N4 4800 bps
- &N5 7200 bps
- &N6 9600 bps
- &N7 12,000 bps
- &N8 14,400 bps
- &N9 16,800 bps
- &N10 19,200 bps
- &N11 21,600 bps
- &N12 24,000 bps
- &N13 26,400 bps
- &N14 28,800 bps
- &N15 31,200 bps
- &N16 33,600 bps
- &N17 33,333 bps
- &N18 37,333 bps
- &N19 41,333 bps
- &N20 42,666 bps
- &N21 44,000 bps
- &N22 45,333 bps
- &N23 46,666 bps

&N Continued

&N24 48,000 bps
&N25 49,333 bps
&N26 50,666 bps
&N27 52,000 bps
&N28 53,333 bps
&N29 54,666 bps
&N30 56,000 bps
&N31 57,333 bps

&P*n* Sets pulse (rotary) dial make/break ratio.

&P0 U.S./Canada ratio, 39%/61%
&P1 U.K. ratio, 33%/67%

&R*n* Sets Receive Data (RD) hardware flow control, Request to Send (RTS) (see also &H*n*).

&R0 Reserved
&R1 Modem ignores RTS
&R2 Received Data to computer only on RTS

&S*n* Controls Data Set Ready (DSR) operations.

&S0 DSR override; always ON
&S1 Modem controls DSR

&T*n* Begins test modes.

&T0 Ends testing
&T1 Analog Loopback
&T2 Reserved
&T3 Local Digital Loopback
&T4 Enables Remote Digital Loopback

&U Continued

&U27 52,000 bps
&U28 53,333 bps
&U29 54,666 bps
&U30 56,000 bps
&U31 57,333 bps

&W*n* Writes current configuration to NVRAM templates.

&W0 Modifies the NVRAM 0 template (Y0)
&W1 Modifies the NVRAM 1 template (Y1)

&Y*n* Sets break handling.

&Y0 Destructive, but doesn't send break
&Y1 Destructive, expedited
&Y2 Nondestructive, expedited

&Z*n*=*s* Writes phone number string *s* to NVRAM at position *n* (*n* = 0–3).

&Z*n*=L Writes last executed dial string to NVRAM at position n (n = 0–3).

&Z*n*? Displays the phone number stored at position n (n = 0–3).

&ZL? Displays the last executed dial string.

+++ Escapes to online-command mode.

DIP Switches (Modems with DIP Switches Only)

Note: If a DIP switch is on, it is down. If a DIP switch is off, it is up. *Defaults are in italics.*

Switch	Factory Setting	Function
1	OFF	Data Terminal Ready (DTR) Override
		OFF Normal DTR operations: computer must provide DTR signal for modem to accept commands; dropping DTR terminates a call
		ON Modem ignores DTR (Override)
2	OFF	Verbal/Numeric Result Codes
		OFF Verbal (word) results
		ON Numeric results
3	ON	Result Code Display
		OFF Suppresses result codes
		ON Enables result codes
4	OFF	Command Mode Local Echo Suppression
		OFF Displays keyboard commands
		ON Suppresses echo
5	ON	Auto Answer Suppression
		OFF Modem answers on first ring, or higher if specified in NVRAM
		ON Disables auto answer

Switch	Factory Setting	Function
6	OFF	Carrier Detect (CD) Override OFF Modem sends CD signal when it connects with another modem, drops CD on disconnect ON CD always ON (Override)
7	OFF	Power-on and ATZ Reset Software Defaults OFF Loads Y or Y1 configuration from user-defined nonvolatile memory (NVRAM) ON Loads &F0—Generic template from read only memory (ROM)
8	ON	AT Command Set Recognition OFF Disables command recognition (Dumb Mode) ON Enables recognition (Smart mode)

S-Registers

To change a setting, use the ATS*r*=*n* command, where *r* is the register and *n* is a decimal value from 0 – 255 (unless otherwise indicated).

Register	Default	Function
S0	0	Sets the number of rings on which to answer in Auto Answer Mode. When set to 0, Auto Answer is disabled.
S1	0	Counts and stores the number of rings from an incoming call. (S0 must be greater than 0.)
S2	43	Stores the ASCII decimal code for the escape code character. Default character is +. A value of 128 – 255 disables the escape code.
S3	13	Stores the ASCII code for the Carriage Return character. Valid range is 0 – 127.
S4	10	Stores the ASCII decimal code for the Line Feed character. Valid range is 0 – 127.
S5	8	Stores the ASCII decimal code for the Backspace character. A value of 128–255 disables the Backspace key's delete function.

Register	Default	Function
S6	2	Sets the number of seconds the modem waits before dialing. If X*n* is set to X2 or X4, this is the time-out length if there isn't a dial tone.
S7	60	Sets the number of seconds the modem waits for a carrier. May be set for much longer duration if, for example, the modem is originating an international connection.
S8	2	Sets the duration, in seconds, for the pause (,) option in the Dial command.
S9	6	Sets the required duration, in tenths of a second, of the remote modem's carrier signal before recognition by the Sportster.
S10	7	Sets the duration, in tenths of a second, that the modem waits to hang up after loss of carrier. This guard time allows the modem to distinguish between a line disturbance from a true disconnect (hang up) by the remote modem. While we don't recommend connecting the modem to a line with call waiting, if you have it, you may wish to adjust this setting upward to prevent the modem from misinterpreting the second call signal as a disconnect by the remote modem.

Register	Default	Function
S10 *(cont.)*	7	A better alternative is to ask your phone company how to temporarily disable call waiting (usually *70W). For example: ATDT *70W *phone number*. **Note:** If you set S10 = 255, the modem will not hang up when carrier is lost. Dropping DTR hangs up the modem.
S11	70	Sets the duration and spacing, in milliseconds, for tone dialing.
S12	50	Sets the duration, in fiftieths of a second, of the guard time for the escape code sequence (+++).
S13	0	Bit-mapped register. Select the bit(s) you want on and set S13 to the total of the values in the Value column. For example, ATS13 = 17 enables bit 0 (value is 1) and bit 4 (value is 16).

Bit	Value	Result
0	1	Reset when DTR drops.
1	2	Reset non-MNP transmit buffer from 1.5K to 128 bytes.*
2	4	Set backspace key to delete.
3	8	On DTR signal, auto dial the number stored in NVRAM at position 0.

Register	Default	Function		
S13 *(cont.)*		**Bit**	**Value**	**Result**
		4	16	At power on/reset, Auto Dial the number stored in NVRAM at position 0.
		5	32	Reserved
		6	64	Disable quick retrains.
		7	128	Disconnect on escape code.

* The 1.5K-byte non-ARQ buffer allows data transfer with Xmodem- and Ymodem-type file transfer protocols without using flow control.
The 128-byte option lets remote users with slower modems keep data you're sending from scrolling off their screens. When remote users send your computer an XOFF (Ctrl-S) and you stop transmitting, the data in transit from your modem's buffer doesn't exceed the size of their screen.
This is also very helpful in situations when a remote modem/printer application is losing characters.

S14 0 Reserved

S15 0 Bit-mapped register setup. To set the register, see instructions for S13.

Bit	**Value**	**Result**
0	1	Disable ARQ/MNP for V.22.
1	2	Disable ARQ/MNP for .22bis.
2	4	Disable ARQ/MNP V.32/V.32bis/V.32terbo.

Register	Default	Function
S15 *(cont.)*		**Bit** **Value** **Result** 3 8 Disable MNP handshake. 4 16 Disable MNP level 4. 5 32 Disable MNP level 3. 6 64 MNP incompatibility. 7 128 Disable V.42 operation. 8 136 Disable V.42 detect phase.
S16	0	Bit-mapped register setup. To set the register, see instructions for S13. **Bit** **Value** **Result** 0 1 Reserved 1 2 Touch tone dialing test. 2-7 4-128 Reserved
S17	0	Reserved
S18	0	Test timer for &T loopback testing. Sets the time in seconds of testing before the modem automatically times out and terminates the test. When set to 0, the timer is disabled. Valid range is 1-255.

Register	Default	Function
S19	0	Sets the duration, in minutes, for the inactivity timer. The timer activates when there is no data activity on the phone line; at time-out the modem hangs up. S19 = 0 disables the timer.
S20	0	Reserved
S21	10	Sets the length, in 10-millisecond units, of breaks sent from the modem to the computer; applies to MNP or V.42 mode only.
S22	17	Stores the ASCII decimal code for the XON character.
S23	19	Stores the ASCII decimal code for the XOFF character.
S24	0	Reserved
S25	20	Sets the duration, in hundredths of a second, that DTR must be dropped so that the modem doesn't interpret a random glitch as a DTR loss. (Most users will want to use the default; this register is useful for setting compatibility with older systems running under older operating software.)
S26	0	Reserved

Register	Default	Function
S27	0	Bit-mapped register setup. To set the register, see instructions for S13.

Bit	Value	Result
0	1	Enables ITU-T V.21 modulation at 300 bps for overseas calls; in V.21 mode, the modem answers both overseas and domestic (U.S. and Canada) calls, but only originates V.21 calls. (Default Bell 103)
1	2	Enables unencoded (non-trellis coded) modulation in V.32 mode.
2	4	Disables V.32 modulation.
3	8	Disables 2100 Hz answer tone to allow two V.42 modems to connect faster.
4	16	Enables V.23 fallback mode.
5	32	Disables V.32*bis* mode.
6	64	Disable V.42 selective reject.
7	128	Software compatibility mode. This setting disables the codes and displays the 9600 code instead. The actual rate of the call can be viewed on the ATI6 screen. Used for unusual software incompatibilities. Some software may not accept 7200, 12,000, and 14,400 bps or greater result codes.

Register	Default	Function
S28	0	Eliminates the V.32 answer tones for a faster connection.
	8	Default item, all times are in tenths of seconds.
	255	Disables all connections except V.32 at 9600 bps.
S29	20	Sets the duration, in tenths of a second, of the V.21 answer mode fallback timer.
S30	0	Reserved
S31	128	Reserved
S32	2	Bit mapped register setup. To set the register, see the instructions for S13.

Bit	Value	Result
0	1	V.8 Call Indicate enabled.
1	2	Enables V.8 mode.
2	4	Reserved.
3	8	Disable V.34 modulation.
4	16	Disable V.34+ modulation.
5	32	Disable x2 modulation.
6-7-	64-128	Reserved

Register	Default	Function

S33 — 0

Bit mapped register setup. To set the register, see the instructions for S13.

Bit	Value	Result
0	1	Disable 2400 symbol rate.
1	2	Disable 2743 symbol rate.
2	4	Disable 2800 symbol rate.
3	8	Disable 3000 symbol rate.
4	16	Disable 3200 symbol rate.
5	32	Disable 3429 symbol rate.
6	64	Reserved
7	128	Disable shaping.

S34 — 0

Bit mapped register setup. To set registers, see instructions for S13.

Bit	Value	Result
0	1	Disable 8S-2D trellis encoding.
1	2	Disable 16S-4D trellis encoding.
2	4	Disable 32S-2D trellis encoding.
3	8	Disable 64S-4D trellis encoding.
4	16	Disable non-linear coding.

Register	Default	Function		
S34 *(cont.)*		**Bit**	**Value**	**Result**
		5	32	Disable TX level deviation.
		6	64	Disable Pre-emphasis.
		7	128	Disable Pre-coding.
S35		Reserved		
S36-S37		Reserved		
S38	0	Sets an optional delay, in seconds, before a forced hang-up and clearing of the Transmit buffer when DTR drops during an ARQ call. This allows time for a remote modem to acknowledge receipt of all transmitted data before it is disconnected. The modem immediately hangs up when DTR drops. This option only applies to connections terminated by dropping DTR. If the modem receives the ATH command, it ignores S38 and immediately hangs up.		

Register	Default	Function
S39-S40	Reserved	
S41	0	Bit mapped register setup. To set registers, see instructions for S13.

Bit	Value	Result
0	1	Distinctive ring enabled.

S42	0	Reserved

The Serial Interface

The serial interface is a standard developed by the Electronic Industries Association (EIA). It defines the signals and voltages used when data is exchanged between a computer and a modem or serial printer.

The entire standard covers many more functions than are used in most data communications applications. Data is transmitted between the devices over a shielded serial cable with a 25-pin male (DB-25P) connector to the modem and a 25-pin, 9-pin, 8-pin, or custom-built connector to the computer.

FCC regulations require the use of a shielded cable when connecting a modem to a computer to ensure minimal interference with radio and television.

Pin assignments are factory-set in the Sportster modem to match the standard DB-25 assignments in the following table. DB-9 connectors for IBM/AT-compatible computers should be wired at the computer end of the cable as shown in the DB-9 column.

Serial Interface Pin Definitions

DB-25	DB-9	Circuit	Function	Signal Source Computer/Modem
1	—	AA	Chassis Ground	Both
2	3	BA	Transmitted Data	Computer
3	2	BB	Received Data	Modem
4	7	CA	Request to Send	Computer
5	8	CB	Clear to Send	Modem
6	6	CC	Data Set Ready	Modem
7	5	AB	Signal Ground	Both
8	1	CF	Carrier Detect	Modem
12	—	SCF	Speed Indicate	Modem
20	4	CD	Data Terminal Ready	Computer
22	9	CE	Ring Indicate	Modem

Section E: Regulatory Information

Manufacturer's Declaration of Conformity

U.S. Robotics
7770 North Frontage Road
Skokie, Illinois 60077-2690
U.S.A.

declares that the product *U.S. Robotics Sportster 56K Faxmodem* conforms to the FCC's specifications:

Part 15:
Operation is subject to the following two conditions:
(1) this device may not cause harmful electromagnetic interference, and
(2) this device must accept any interference received including interference that may cause undesired operations.

Part 68:
This equipment complies with FCC Rules Part 68. Located on the bottom of the modem is the FCC Registration Number and Ringer Equivalence Number (REN).
RINGER EQUIVALENCE = 0.2B
You must provide this information to the telephone company when requested.

The REN is used to determine the number of devices you may legally connect to your telephone line. In most areas, the sum of the REN of all devices connected to one line must not exceed five (5.0). You should contact your telephone company to

determine the maximum REN for your calling area.

This equipment uses the following USOC jacks: RJ11C.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

An FCC compliant telephone cord and modular plug are provided with this equipment, which is designed to connect to the telephone network or premises wiring using a Part 68 compliant compatible jack. See installation instructions for details.

Caution to the User

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IC (Canada)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled *Digital Apparatus*, ICES-003 of Industry Canada.
Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B préscrites dans la norme sur le matériel brouilleur: *Appareils Numériques*, NMB-003 édictée par l'Industrie Canada.

UL Listing/CUL Listing

This information technology equipment is UL-Listed and CUL-Listed for use with

UL-Listed personal computers that have installation instructions detailing user installation of card cage accessories.

Connecting to the Telephone Company

It is not necessary to notify the telephone company before installing the modem. However, the telephone company may request the telephone number(s) to which the Sportster is connected and the FCC information printed on this page.

Be sure that the telephone line you are connecting the modem to is a standard analog line and not a digital (PBX), party, or coin telephone line.

If the modem is malfunctioning, it may affect the telephone lines. In this case, disconnect the modem until the source of the difficulty is traced.

Fax Branding

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent, an identification of the business or other entity, or other individual sending the message, and the telephone number of the sending machine or of such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your Sportster, refer to the RapidComm

manual on the CD-ROM that shipped with your modem. If you're using a different communications software program, refer to its manual.

Radio and Television Interference

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. The modem has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause interference to radio or television reception, which you can determine by monitoring reception when the modem is installed and when it is removed from the computer, try to correct the problem with one or more of the following measures:

- Reorient the receiving antenna (for televisions with antenna reception only) or cable input device.
- Relocate the computer with respect to the receiver.
- Relocate the computer and/or the receiver so that they are on separate branch circuits.

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the

following booklet, prepared by the Federal Communications Commission, helpful:

How to Identify and Resolve Radio-TV Interference Problems
Stock No. 004-000-0345-4
U.S. Government Printing Office
Washington, DC 20402

In accordance with Part 15 of the FCC rules, the user is cautioned that any changes or modifications to the equipment described in this manual that are not expressly approved by U.S. Robotics, Inc. could void the user's authority to operate the equipment.

For Canadian Modem Users

NOTICE: The Industry Canada (IC) label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single-line, individual service may be extended by means of a certified connector assembly (telephone extension cord.) The customer should be aware that compliance with the above

conditions may not prevent degradation of service in some situations. Currently, telecommunication companies do not allow users to connect their equipment to jacks except in precise situations that are spelled out in tarriffing arrangements with those companies.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

For your own protection, make sure that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. **CAUTION:** Do ***NOT*** attempt to make such connections yourself. Instead contact the appropriate electric inspection authority, or electrician, as appropriate.

"NOTICE: The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5."

REN: _____

WARRANTY AND REPAIR SERVICE CENTER:

(Repair/service center name and address) (phone number)

AVIS: L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Cette information est indiquée dans le document suivant: "Equipment Technical Requirements". Toutefois, le Ministère ne guarantie pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunications. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. Dans certains cas, le réseau interne de la campagnie associeé avec une ligne individuelle peut être étendue en utilisant un connecteur conforme aux reglementations (rallonge de corde téléphonique). L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations. Actuellement, les entreprises de télécommunication ne permettent pas que l'on raccorde leur matériel à des jacks d'abonné, sauf dans les cas précis prévus par les tarifs particuliers de ces entreprises.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien canadien autorisé et désigné par

le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur, ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

AVERTISSEMENT: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours aux services d'un électricien.

NOTICE: le Ringer Equivalence Number (REN) de chaque appareil donne une indication du nombre maximal de terminaux qui peut être branché à l'interface téléphonique. La termination d'une interface peut consister de n'importe qu'elle combinaison d'appareils sur le réseau, seulement si la somme du Ringer Equivalence Numbers de tous les appareils n'excède pas 5."

REN: _____

Centre de guarantie et de service après-vente:

(adresse et numéro de téléphone.)

Limited Warranty

U.S. Robotics Access Corp. warrants to the original end-user purchaser that this product will be free from defects in materials and workmanship for a period of five years from the date of purchase. During the limited warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or a similar model, which may be a refurbished model) at U.S. Robotics' option, without charge for either parts or labor. This limited warranty shall not apply if the product is modified, tampered with, misused, or subjected to abnormal working conditions (including, but not limited to, lightning and water damage).

THIS LIMITED WARRANTY DOES NOT GUARANTEE YOU UNINTERRUPTED SERVICE. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. U.S. ROBOTICS SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR CHARACTER, INCLUDING, WITHOUT LIMITATION, LOSS OF REVENUE OR PROFITS, FAILURE

TO REALIZE SAVINGS OR OTHER BENEFITS, LOSS OF DATA OR USE, DAMAGE TO EQUIPMENT, AND CLAIMS AGAINST THE PURCHASER BY ANY THIRD PERSON, EVEN IF U.S. ROBOTICS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This limited warranty gives you specific legal rights. You may have others, which vary from state to state. Some states do not allow limitations on duration of an implied warranty, or the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.

To obtain service under this limited warranty, contact the U.S. Robotics Technical Support Department at 847-982-5151 or by mail at U.S. Robotics, 7770 N. Frontage Road, Attn.: Technical Support Dept., Skokie, Illinois 60077-2690. You will be given a Service Repair Order ("SRO") number to help U.S. Robotics keep track of your limited warranty request. Once you have received your SRO number, take or send the product, postage prepaid and insured, to U.S. Robotics at 8100 N. McCormick Blvd., U1 Receiving, Skokie, Illinois 60076-2999. Include proof of the date of purchase. IMPORTANT: If you send your unit, pack it securely, and be sure that your SRO number is visible on the outside of the package.

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The Intelligent Choice in Information Access

7770 North Frontage Road
Skokie, Illinois 60077-2690
Technical Support: 847-982-5151
Priority "No Hold" Service: 900-555-USR1

1.024.1063-00

Service and Support

INFORMATION

Thank you for purchasing a U.S. Robotics product. If you should ever have questions about or problems with your modem, please feel free to use any of the support services listed here.

Register Your Product:

Registered users' questions can be answered faster because we already have the basic information about their modems in our customer database. To register, follow the instructions in your Installation Guide to reach USR's Bulletin Board System, or use the communications software (if included with this product). Software instructions are shown both in the software manual and on-screen.

Contacting USR for Support:

The fastest way to find answers for most questions is to contact our 24-hour On-Line Services:

- *Mac BBS 847-676-1598*
- *PC Bulletin Board 847-982-5092*
- *Fax On Demand 800-762-6163*
- *E-Mail support@usr.com*
- *Compuserve 76711,707 or enter GO USROBOTICS at any CompuServe prompt (US Robotics also has a section on CompuServe at FTP.USR.COM.)*
- *Fax 847-676-7323*
- *World Wide Web http://www.usr.com*
- *America Online – Connect to U.S. Robotics through America Online. Go to the **Keyword** field and type **USROBOTICS.***
- *Anonymous Internet FTP – Provides free library containing the same files as the BBS site. FTP to **ftp.usr.com.***

Fax On Demand and Internet On Demand systems will respond immediately. All E-mail and fax inquiries will be responded to within a 24 hour period during the work week.

If you are having initial installation problems or your modem becomes inoperable, then call:

- *Automated Phone 847-982-5151 Choose the Technical Support option when prompted. Refer to map inside.*

Live Support Representatives are also available at the number above during normal business hours. Because these representatives handle the most complex problems, their lines may be busy for extended periods. To avoid a long wait, please try one or more of the other options first.

Priority No-Hold Service

- *U.S. Robotics also offers a 900 toll number to dial for immediate technical support. These lines are staffed from 8am to 6pm cst, Monday through Friday. 1-900-555-USR1*

1.024.127-C

US Robotics®
The Intelligent Choice in Information Access

Customer Support

PHONE SYSTEM GUIDE

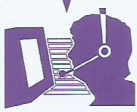
847-982-5151

Hardware Repair = 1
Part Sales and Product Specs = 2
Current Code Revision = 3
Sportster/Desktop Products = 4
Courier/Rackmont Products = 5

1 — Repair Information

2 — Technical Specifications = 1
Where to buy products? = 2
Part sales = 3

3



5 — Courier and Rack product support

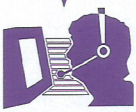
3 — Code Revision by Product Type

4 — Fax on Demand 800-762-6163, or at support@usr.com, or = 1.
Most common questions & answers = 2.
Support representative, press 3.
Bulletin board at 847-982-5092
CompuServe at 76711,707 or GOUSROBOTICS.
Internet at support@usr.com.
FTP.usr.com
Fax at 847-676-7323.

Technical Specifications:
1 — Specifications by Product
2 — Reseller Locations

Fax on Demand System ← 1

3



2 — Line problems = 1.
Quicklink = 2.
Sportster & Worldport = 3.
Sportster for Macintosh = 4.
PCMCIA = 5.
Hardware repair = 6.
Other software, FOD = 7
Courier, Shared Access, etc., = 8

UPDATE NOW!

Your new Sportster® 56K* modem just gets better and better!

Congratulations—you are now the owner of a modem with the future built in. Flash ROM technology lets you download new features and software updates into your Sportster quickly and easily.

Download the latest software NOW!

As great as this Sportster modem is, our engineers are continually developing even more powerful software for it! So go to **http://x2.usr.com/update** right now, to download the most up-to-date code!

Or go to the U.S. Robotics Bulletin Board Service and follow these steps:

1. Launch communications software (on the U.S. Robotics *Connections*™ CD-ROM).
2. Enter Terminal mode.
3. Enter the command "atdt 1-847-982-5092" and press Enter.
4. Enter the word "modem" in the space labeled First Name; enter "utility" in the space labeled Last Name. Press Enter. The file will download automatically.
5. Go to the rapidcomm/inbox directory; double click on setup.exe.
6. Follow the instructions given by the Modem Update Wizard.

We're sure you'll spend many enjoyable and productive hours using your Sportster modem to bring the universe of information into your home or office. Thanks for choosing U.S. Robotics!

USRobotics®
The Intelligent Choice in Information Access

USRobotics X TECHNOLOGY

*These modems are capable of 56 Kbps downloads. However, current regulations limit download speeds to 53 Kbps.

©1997 U.S. Robotics. All rights reserved. U.S. Robotics, the USRobotics logo and Sportster are registered trademarks and *Connections*, RapidComm, x2 and the x2 logo are trademarks of U.S. Robotics. Product specifications and upgrade program subject to change without notice. Contact your U.S. Robotics representative for current product information. 2.14.97 #2129

1.024.1031–01

x2™ Installation Support

888-877-7202

This toll free number connects you to x2 installation assistance through the end of April 1997. Receive priority and extended coverage support for your new x2 product.

U.S.Robotics®

The Intelligent Choice in Information Access

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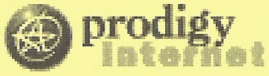
1.024.1156-00

CONNECT NOW!

You can connect at x2™ speeds as soon as you install your new Sportster. The following Internet service providers have x2 available now!



Check our web page at (**http://x2.usr.com/connectnow**) for more information about these and other Internet service providers. You can contact the Internet service providers listed above by calling their customer service numbers:

America Online : 800-827-6364
Prodigy Internet: 800-776-3449
CompuServe : 800-848-8990

U.S. Robotics CONNECT TO OUR BBS: You can access the U.S. Robotics x2 BBS at (847) 982-5092.

If you do not know how to use a BBS, check out the Online Help Resources section in your User's Guide & Reference, included in this package.

U.S. Robotics®

The Intelligent Choice in Information Access

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1.024.1105-02

REGISTER

Please print or type

PCD002

First Name _____ Last Name _____

Company _____

Address _____

City _____ St/Prov _____ Zip/Post _____

Phone ( ) _____ Fax ( ) _____

E-mail _____

1. Date of purchase_____

2. Modem Serial Number

_____

3. What kind of modem did you buy?
a. ❑ Sportster 28.8/33.6
b. ❑ Sportster for Mac 28.8/33.6
c. ❑ Sportster Winmodem 33.6
d. ❑ Sportster Voice 28.8/33.6
e. ❑ Sportster Voice for Mac 28.8/33.6
f. ❑ Sportster ISDN Modem
g. ❑ Sportster ISDN 128K
h. ❑ Sportster External Faxmodem 56K
i. ❑ Sportster Internal Faxmodem 56K
j. ❑ Sportster Voice External 56K
k. ❑ Sportster Voice Internal 56K
l. ❑ Sportster Faxmodem for Mac 56K

4. Where did you buy your modem?
a. ❑ Retail
b. ❑ Mail Order
c. ❑ System Integrator
d. ❑ VAR/Consultant
e. ❑ Other_____

5. How did you learn about U.S. Robotics/Sportster? (check all that apply)
a. ❑ Advertisement
b. ❑ Store personnel
c. ❑ U.S. Robotics' WWW site
d. ❑ Internet
e. ❑ Article
f. ❑ Friend

6. What magazines do you read? (check all that apply)
a. ❑ PC Computing
b. ❑ PC Magazine
c. ❑ PC World
d. ❑ PC Week
e. ❑ Wired
f. ❑ Other_____
f. ❑ MacUser
g. ❑ Mac Home Journal
h. ❑ MacWorld
i. ❑ MacWeek
j. ❑ Internet World

7. What computer peripherals/accessories do you own or plan to buy in the next 12 months? (check all that apply)

a.	Printer	❑ Own	❑ Plan to buy
b.	CD-ROM	❑ Own	❑ Plan to buy
c.	Speakers/Sound card	❑ Own	❑ Plan to buy
d.	Zip Drive	❑ Own	❑ Plan to buy
e.	Ethernet Card	❑ Own	❑ Plan to buy
f.	Ethernet/Modem combo card	❑ Own	❑ Plan to buy
g.	Cellular Phone	❑ Own	❑ Plan to buy
h.	Pager	❑ Own	❑ Plan to buy
i.	Personal Digital Assistant	❑ Own	❑ Plan to buy
j.	Scanner	❑ Own	❑ Plan to buy
k.	Other	❑ Own	❑ Plan to buy

8. Are you interested in receiving information about other U.S. Robotics products?
a. ❑ Desktop Modems
b. ❑ Hand Held
c. ❑ ISDN
d. ❑ Laptop Modems
e. ❑ Performance™ Telephones
f. ❑ Network Solutions

9. Where do you prefer to receive new product/ upgrade information & helpful hints?
a. ❑ mailing address
b. ❑ eMail address
c. ❑ do not send information

10. ❑ Do not release my name and address to other companies

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MINIMUM SYSTEM REQUIREMENTS:

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386/33 MHz processor or higher (486 or higher recommended)
Windows 3.x or Windows 95
8MB of RAM (16MB recommended)
256 SVGA (640 x 480)
Double-speed CD-ROM or higher

Macintosh®

68030 processor or higher (Power PC recommended)
System 7.0 or higher
8MB of RAM (16MB recommended)
256 color monitor (640 x 480)
Double-speed CD-ROM or higher

Additional requirements may be present with individual products contained or listed on this CD-ROM. See each product's description for more information.

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FOLLOW THESE INSTRUCTIONS:

Windows® Users

1. Quit all other applications
2. Insert CD-ROM into your CD-ROM drive
3. Windows 95: select START and RUN from the Taskbar
   Windows 3.1x: select RUN from the Program Manager's FILE menu
4. Type D:\usrcd3.exe (Replace D: with the letter of your CD-ROM drive if necessary)
5. Click OK.

Macintosh® Users

1. Quit all other applications
2. Insert CD-ROM into your CD-ROM drive
3. Double-click on the U.S. Robotics Connections icon.

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